

JOHN DEERE
WORLDWIDE COMMERCIAL & CONSUMER
EQUIPMENT DIVISION

GATOR™ Utility Vehicle
TH 6X4 Gas

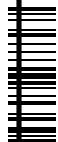
OMM161296 G9

OPERATOR'S MANUAL



JOHN DEERE

Export Version
Litho in U.S.A.



DCY



OMM161296

INTRODUCTION

Thank You for Purchasing a John Deere Product

We appreciate having you as a customer and wish you many years of safe and satisfied use of your machine.

Using Your Operator's Manual

This manual is an important part of your machine and should remain with the machine when you sell it.

Reading your operator's manual will help you and others avoid personal injury or damage to the machine. Information given in this manual will provide the operator with the safest and most effective use of the machine. Knowing how to operate this machine safely and correctly will allow you to train others who may operate this machine.

If you have an attachment, use the safety and operating information in the attachment operator's manual along with the machine operator's manual to operate the attachment safely and correctly.

This manual and safety signs on your machine may also be available in other languages (see your authorized dealer to order).

Sections in your operator's manual are placed in a specific order to help you understand all the safety messages and learn the controls so you can operate this machine safely. You can also use this manual to answer any specific operating or servicing questions. A convenient index located at the end of this book will help you to find needed information quickly.

The machine shown in this manual may differ slightly from your machine, but will be similar enough to help you understand our instructions.

RIGHT-HAND and LEFT-HAND sides are determined by facing in the direction the machine will travel when going forward. When you see a broken line (-----), the item referred to is hidden from view.

Before delivering this machine, your dealer performed a predelivery inspection to ensure best performance.

Machine Use

This machine is designed solely for use in customary utility operations, park and amenity area maintenance, for appropriate agricultural operations, and for winter work. Use in any other way is considered as contrary to the intended use.

This machine is not intended for use in forestry operations, unless equipped with a Falling Objects Protection Structure (FOPS). The operator station does not provide adequate

protection to the occupants in that environment unless equipped with a FOPS.

The cab available from the manufacturer is not designed to provide adequate protection from hazardous substances. The operator must wear appropriate personal protection equipment.

The manufacturer accepts no liability for damage or injury resulting from this misuse, and these risks must be borne solely by the user. Compliance with and strict adherence to the conditions of operation, service and repair as specified by the manufacturer also constitute essential elements for the intended use.

This machine should be operated, serviced and repaired only by persons familiar with all its particular characteristics and acquainted with the relevant safety rules (accident prevention). The accident prevention regulations, all other generally recognized regulations on safety and occupational medicine and the road traffic regulations must be observed at all times.

Setting fuel delivery beyond published factory specifications or otherwise overpowering will result in loss of warranty protection for this machine.

Any arbitrary modifications carried out on this machine will relieve the manufacturer of all liability for any resulting damage or injury.

Special Messages

Your manual contains special messages to bring attention to potential safety concerns, machine damage as well as helpful operating and servicing information. Please read all the information carefully to avoid injury and machine damage.



CAUTION: Avoid injury! This symbol and text highlight potential hazards or death to the operator or bystanders that may occur if the hazards or procedures are ignored.

IMPORTANT: Avoid damage! This text is used to tell the operator of actions or conditions that might result in damage to the machine.

NOTE: General information is given throughout the manual that may help the operator in the operation or service of the machine.

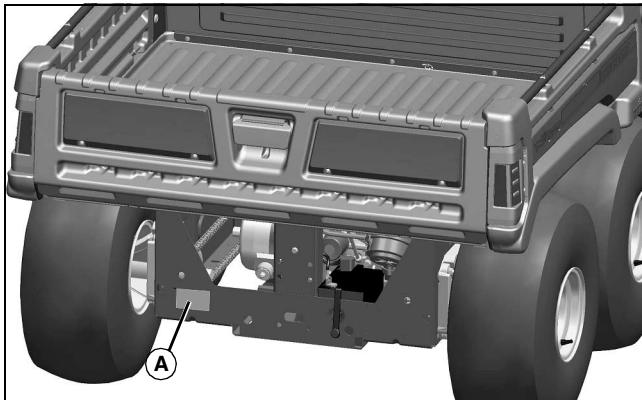
PRODUCT IDENTIFICATION

Record Identification Numbers

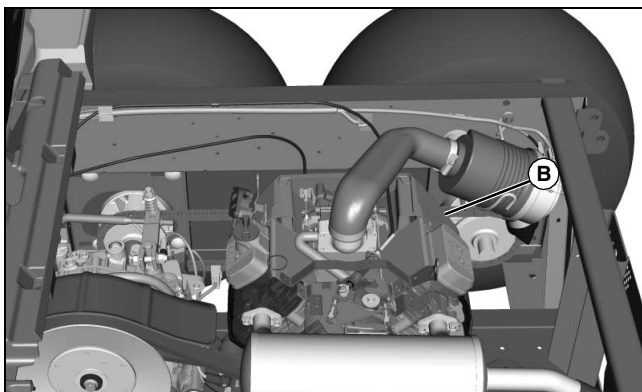
TH 6X4 Gas - PIN (050001-)

If you need to contact an Authorized Service Center for information on servicing, always provide the product model and identification numbers.

You will need to locate the identification numbers for the product. Record the information in the spaces provided below.



MX27352



MX33297

DATE OF PURCHASE:

DEALER NAME:

DEALER PHONE:

PRODUCT IDENTIFICATION NUMBER (A):

ENGINE SERIAL NUMBER (B):

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Original Instruction

All information, illustrations and specifications in this manual are based on the latest information at the time of publication. The right is reserved to make changes at any time without notice.

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John Deere Worldwide Commercial and Consumer Equipment Division

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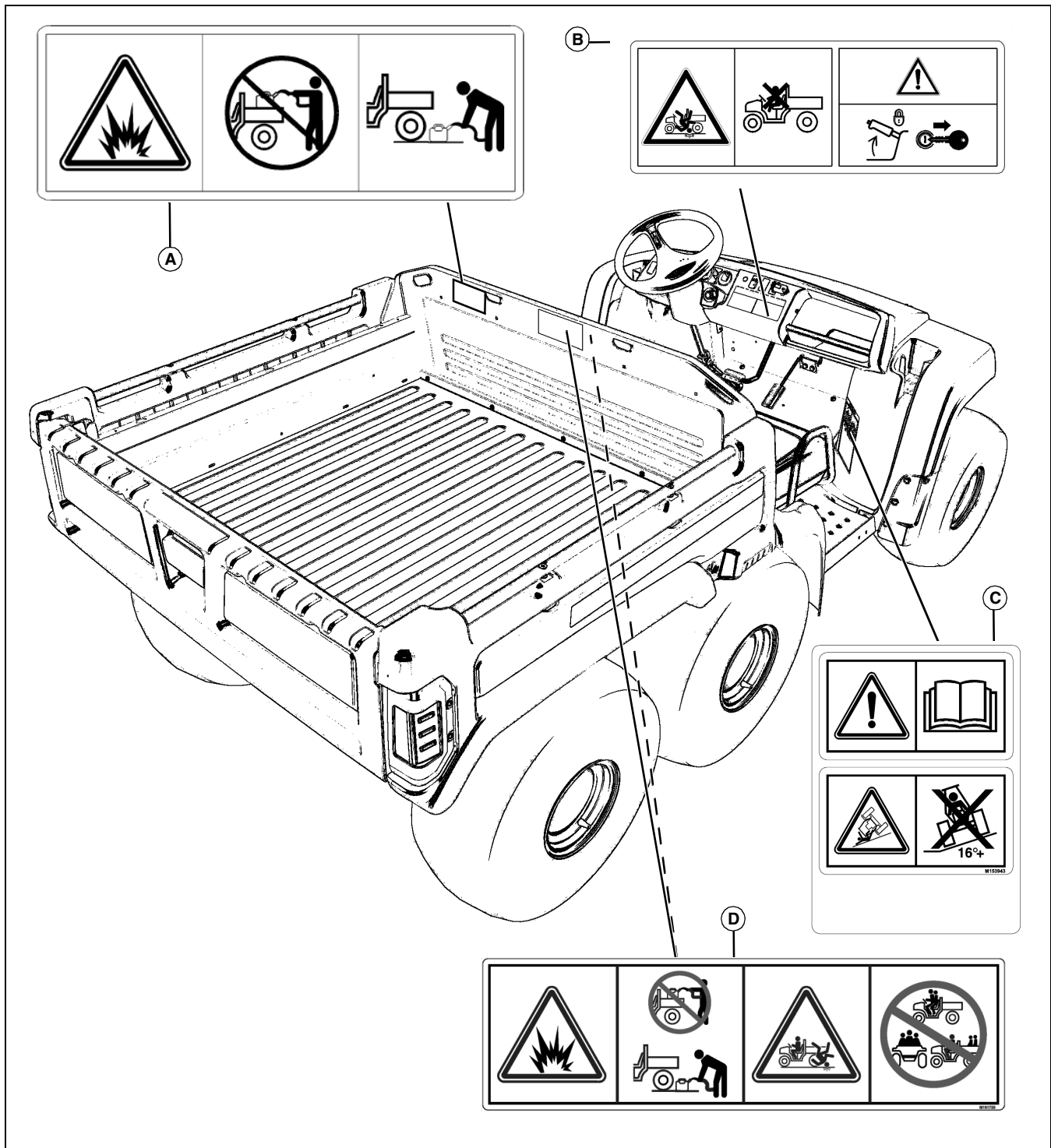
Previous Editions

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OMM161296 G9 - English

SAFETY LABELS

Safety Label Location



MX43078

D - WARNING - M161725

Picture Note: Use label number listed in table below to locate complete text of safety label message following this illustration.

A - WARNING - M151630

B - WARNING/CAUTION - M153941

C - WARNING - M153943

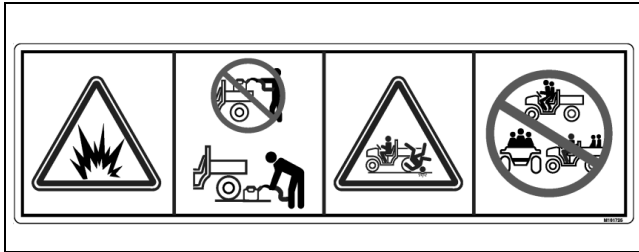
SAFETY LABELS



Pictorial Safety Signs

At several important places on this machine safety signs are affixed intended to signify potential danger. The hazard is identified by a pictorial in a warning triangle. An adjacent pictorial provides information how to avoid personal injury. These safety signs, their placement on the machine and a brief explanatory text are shown in this Safety section.

WARNING M161725



M161725

AVOID INJURY FROM EXPLOSION

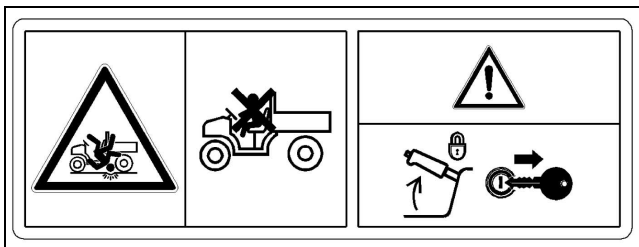
- Do not place gas container inside cargo bed when filling
- Place gas container on ground when filling

RIDERS CAN FALL OFF AND BE KILLED

- Maximum of one person to a seat
- No riders in box or anywhere else

Warning M153941

WARNING: YOUNG DRIVERS INCREASE CHANCE OF DEATH



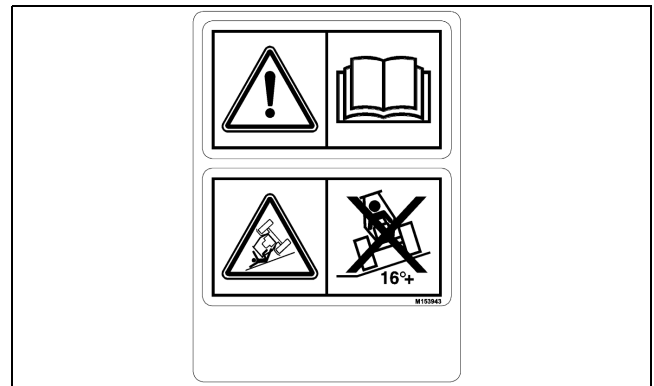
M153941

- Young drivers may not be able to control vehicle.
- No drivers younger than 16 years old.
- Before Leaving Vehicle:
 - Stop engine.
 - Set park brake.

- Remove key.

Warning M153943

WARNING - ROLLOVER OR FALLING OFF MAY CAUSE DEATH

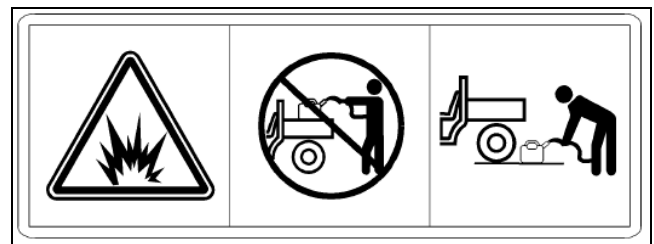


M153943

- Read operator's manual.
- Drive very slowly when turning.
- Always use brake when going down a slope. Vehicle can take-off (freewheel) downhill.
- No loads heavier than:
 - 500 lbs (227 kg) in TS
 - 600 lbs (272 kg) in TX, TX TURF
 - 1000 lbs (454 kg) in TH 6x4
 - 1200 lbs (544 kg) in TH 6x4 Diesel
- Spread load evenly. Tie loads down.
- Reduce speed and load on rough or hilly ground.

Warning M151630

WARNING: AVOID INJURY FROM EXPLOSION

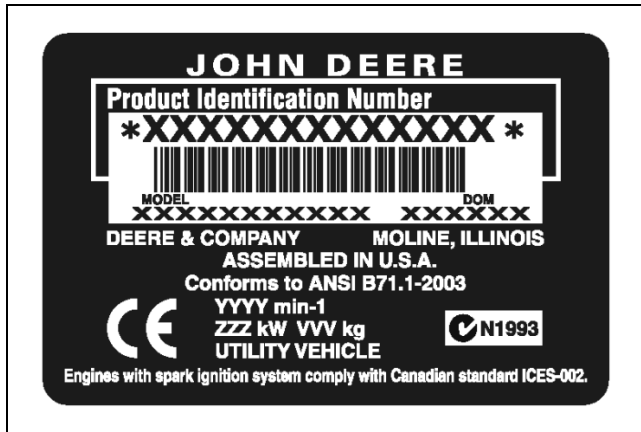


M151630

- Do not place gas container inside cargo box bed when filling.
- Place gas container on ground when filling.

SAFETY LABELS

CE Label



AM140193

This label is part of the utility vehicle identification plate on your utility vehicle. It indicates that your vehicle model has been certified and is in compliance with European Directive Standards: 98/37/EC (before December 29, 2009) or 2006/42/EC (89/392/EEC).

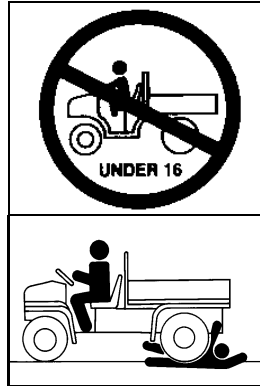
SAFETY

Operating Safely

- Read, understand and follow all instructions in the operator's manual and on the machine before starting.
- Do not misuse the utility vehicle. It is a utility vehicle, not a recreation vehicle.
- The utility vehicle is not intended for use on highways or public roads. It is to be used for off-road use only.
- Slow down and be careful of traffic when operating near or crossing roadways. Use care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.
- The operator should always make sure that the passenger is aware of correct safety procedures while riding in the utility vehicle.
- The passenger should always use the hand holds.
- Horseplay or recreational riding can lead to accidents, severe bodily injury or death.
- Sit on the center of the seat and keep both feet within the foot platform perimeter. Clean foot platform if dirty, and remove any debris from around foot controls.
- Check for debris in engine compartment, especially around brake linkage on each side of the transaxle.
- Always use both hands for steering.
- Know location of controls and how and what they operate.
- Never operate utility vehicle while standing.
- Never operate utility vehicle with the cargo box raised.
- Check brake action before beginning vehicle operation. Adjust or service the brakes as necessary.
- To provide adequate braking ability and traction, do not tow any attachment or loaded trailer unless the cargo box is fully loaded.
- Inspect vehicle before operating. Be sure hardware is tight. Repair or replace damaged, badly worn, or missing parts. Be sure guards and shields are in good condition and fastened in place. Make any necessary adjustments before operating.
- Do not leave vehicle unattended when it is running.
- Operate during daylight or with good artificial light and if you drive at night, use the lights.
- Do not operate vehicle if under the influence of alcohol or other drugs.
- Avoid sudden starts, stops, or turns.
- Always use a level turn-around area.
- Do not wear radio or music headphones. Safe service and operation require your full attention.

Parking Safely

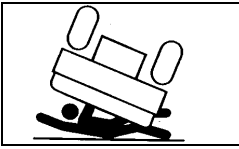
1. Stop vehicle on a level surface, not on a slope.
2. Lock park brake.
3. Stop engine.
4. Remove key.
5. Before you leave the operator's seat, wait for engine and all moving parts to stop.
6. Disconnect the negative battery cable or remove the spark plug wire (for gasoline engines) before servicing the machine.



Protect Children and Prevent Accidents

- This utility vehicle should not be operated by anyone under the age of 16 years.
- Young drivers may not be physically able to control the machine or may not be mature enough to make safe driving decisions.
- Do not allow children to ride as a passenger in this vehicle. Children may not be able to sit safely in the passenger seat and use handholds properly.
- Passengers should always use the handholds while the vehicle is moving.
- The seat belt installed on utility vehicles with an Occupant Protective Structure (OPS) is not designed to restrain a child.
- Never carry passengers, especially children, in the cargo box area. Do not tow children in a cart or trailer.
- Never assume that children will remain where you last saw them. Stay alert to the presence of children.
- Before backing or turning, look behind and around the utility vehicle for children.
- Be alert at all times, drive forward and in reverse carefully. People, especially children, can move quickly into an area of operation.
- Use extra care when coming to blind corners, shrubs, trees, or other objects that may block vision.
- Misuse and recreational riding can lead to accidents, severe bodily injury or death.

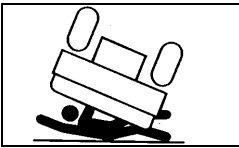
SAFETY



Avoid Excessive Speeds

- Always travel at a speed that is safe and proper for the terrain, visibility and operating conditions, and your experience operating the machine.

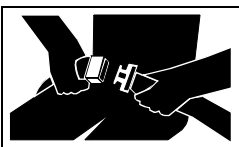
- Use caution when operating the machine in reverse. Use a slow speed and do not make sharp turns. Always look behind before backing.
- Never travel at excessive speeds on slopes, either going up or down. Use a slow speed and do not make sharp turns. Become experienced driving the machine on small slopes before driving on larger hills.



Avoid Tipping

Accidents resulting in serious injury or death can occur from tipping the utility vehicle. Observe the following practices to help prevent accidents:

- Do not misuse the utility vehicle. The utility vehicle is not designed for recreational riding.
- Drive very slowly when turning. Sharp turns could cause the utility vehicle to tip over.
- Reduce speed and exercise extreme caution on slopes or on rough ground.
- Do not overload vehicle and avoid shifting loads. Reduce load when operating over rough or hilly terrain.
- Do not stop or start suddenly when going uphill or downhill. Be especially cautious when changing direction on slopes.
- Stay alert for holes, rocks, and other hidden hazards in the terrain.
- Keep away from drop-offs, ditches, embankments, as well as ponds and other bodies of water. The machine could suddenly roll over if a wheel goes over the edge of a cliff or ditch or if the edge caves in.
- Keep front wheels straight at crest of hill or going over bumps.
- When descending a hill, remove foot from accelerator and apply brakes to reduce speed and maintain control.
- Do not make changes or modifications to the utility vehicle.



Use Seat Belt Properly

- Use a seat belt when you operate with a Roll-Over Protective Structure (ROPS) to minimize chance of injury

from an accident, such as an overturn.

- Never modify, disassemble or attempt to repair the seat belt.
- Replace entire seat belt if mounting hardware, buckle, belt, or retractor show signs of damage.
- Inspect seat belt and mounting hardware at least once a year. Look for signs of loose hardware or belt damage, such as cuts, fraying, extreme or unusual wear, discoloration, or abrasion. Replace only with John Deere-approved replacement parts.
- Layers of heavy clothing can interfere with proper positioning of the seat belt and can reduce the effectiveness of the seat belt.

Keep Occupant Protective System (OPS) Installed Properly

- Never operate the machine without the OPS installed.
- Make certain all parts of the OPS are installed correctly if the OPS structure is loosened or removed for any reason. All OPS hardware should be tightened to the proper torque per manufacturer's recommendations.
- Any alteration of the OPS must be approved by the manufacturer. The protection provided by the OPS will be impaired if the OPS is subjected to structural damage, is involved in an overturn incident, or is in any way altered by welding, bending, drilling, or cutting.
- Never attempt to repair a damaged or altered OPS. It must be replaced to maintain the manufacturer's certification of the structure.



Keep Riders Off Vehicle

- Seating is provided for operator and one adult passenger.
- Never allow riders in the cargo box or other areas where seats are not provided.
- Riders on vehicle are subject to injury such as being struck by foreign objects or being thrown off of the vehicle and severely injured or killed.
- Riders affect the operator's ability to control the vehicle as well as its center of gravity. Also, riders could obstruct the operator's view resulting in the vehicle being operated in an unsafe manner.

Transport Loads Safely

- Be sure load is evenly distributed in cargo box.

SAFETY

- Do not load above load guard.
- Securely anchor all loads in cargo box.
- Reduce cargo box load when operating on rough or hilly terrain.

Towing Loads Safely With Utility Vehicle

- To provide adequate braking ability and traction, weight of towed load (trailer plus cargo) must never exceed the vehicle payload (operator plus passenger plus cargo box load).
- Do not tow a load that exceeds the maximum allowable towing load for this vehicle, as specified in this operator's manual.
- Stopping distance increases with speed and weight of towed load. Travel slowly and allow extra time and distance to stop.
- Tow load at a speed slow enough to maintain control.
- Excessive towed load can cause loss of traction and loss of control on slopes. Reduce towed weight when operating on slopes.
- Never allow children or others in or on towed equipment.
- Use only approved hitches. Tow only with a machine that has a hitch designed for towing. Do not attach towed equipment except at the approved hitch point.
- Follow the manufacturer's recommendations for weight limits for towed equipment and towing on slopes.
- If you cannot back up a slope with a towed load, the slope is too steep to operate on with the towed load. Reduce the towed load or do not operate.
- Do not turn sharply. Use additional caution when turning or operating under adverse surface conditions. Use care when reversing.
- Do not shift to neutral and coast downhill.

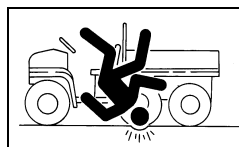
Before Driving

1. Clean foot platform if dirty, and remove any debris from around foot controls. Sit on the center of seat and keep both feet inside foot platform perimeter.
2. Inspect utility vehicle for signs of wear or damage.
3. All safety equipment must be in good condition and fastened in place:
 - Lights.
 - Shields.
 - Safety start devices.

4. Before moving, check around utility vehicle, be sure no one is near it.
5. Inspect mechanical condition of your vehicle before each use to minimize chance of injury or being stranded. Remember, you can ride farther in an hour than you can walk in a day.

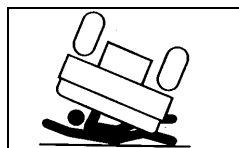
Be sure to check condition of tires and wheels, wheel hardware torque, and maintain proper tire pressure.

6. Securely anchor all loads.



Driving On Rough Terrain

- Use existing trails. Avoid terrain such as dangerous slopes and impassable swamps. Watch carefully for bumps, holes, ruts, loose terrain, or other obstacles.
- Look ahead at terrain. Know what is coming and be prepared to react. Be alert for hazards.
- Keep front wheels straight at crest of hill or going over bumps.
- Reduce speed according to trail, terrain, and visibility conditions.
- The passenger should always use the hand holds.



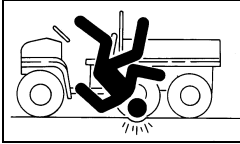
Climbing Or Descending A Hill

- Always use the brakes when going down slopes, the utility vehicle can speed up (freewheel) going down a slope. Engine or clutch braking effect is minimal.
- Balance loads evenly and secure them. Braking could shift the load and affect vehicle stability.
- Sit on center of seat and keep both feet within foot platform.
- Never drive past the limit of visibility. Slow down near crest of hill until getting a clear view of the other side. Never go over the top of any hill at a high speed. An obstacle, sharp drop, another vehicle or person, could be on the other side of the hill.
- Keep front wheels straight at crest of hill or going over bumps.
- Do not stop or start suddenly when going uphill or downhill. Be especially cautious when changing direction on slopes.
- If vehicle stops or loses power going up a hill, lock park brake to hold vehicle on slope. Maintain direction of travel

SAFETY

and release brake slowly. Back straight down hill slowly while maintaining control. Do not turn vehicle sideways. Vehicle is more stable in a straight forward or rearward position.

- When descending a hill, remove foot from accelerator and apply brakes to reduce speed and maintain control.



Driving Across Slopes

- Reduce speed and use caution on slopes and in sharp turns.
- Stay alert for holes, rocks and other hidden hazards in the terrain.

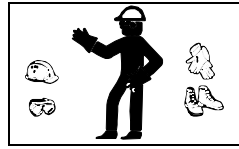
- When riding on soft terrain, turn front wheels slightly uphill to keep utility vehicle on a straight line across the hill.
- If utility vehicle begins to tip, turn front wheel downhill to gain control before proceeding.

Riding Through Water

- Avoid water whenever possible. If drive belt becomes wet, slippage will occur and vehicle will lose power.
- Never cross any body of water where depth may be unknown to the operator. As an operational guideline, deep water is considered anything in excess of 152 mm (6 in.) in depth. Tires may float, making it difficult to maintain control.
- Choose a course within the waterway where both banks have a gradual incline. Cross at a point known to be safe.
- Proceed at a slow steady speed to avoid submerged obstacles and slippery rocks.
- Avoid water crossings where the operation of a utility vehicle may cause damage to waterway beds or erode waterway shoreline.
- Never operate this vehicle in fast-moving water.
- Stopping ability of vehicles with external disk brakes may be affected after driving through water. If necessary, apply brakes several times to dry them out.

Checking Wheel Hardware

- A serious accident could occur causing serious injury if wheel hardware is not tight.
- Check wheel hardware tightness often during the first 100 hours of operation.
- Wheel hardware must be tightened to specified torque using the proper procedure anytime it is loosened.



Wear Appropriate Clothing

- Wear close fitting clothing and safety equipment appropriate for the job.
- Certain operating conditions may dictate that the operator and any passenger wear appropriate safety equipment while operating the vehicle. Be prepared for any existing and potential conditions before operating machine.
- Local safety or insurance regulations may require additional safety equipment such as eye protection or a hard hat.
- Always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.



Practice Safe Maintenance

- Only qualified, trained adults should service this machine.
- Understand service procedure before doing work. Keep area clean and dry.
- Never lubricate, service, or adjust machine while it is moving. Keep safety devices in place and in working condition.
- Keep hands, feet, clothing, jewelry, and long hair away from any moving parts, to prevent them from getting caught.
- Disconnect battery(ies) or remove spark plug wire (for gasoline engines) before making any repairs.
- Keep all nuts and bolts tightened.
- Securely support any machine elements that must be raised for service work. Lock service latches before working on machine with raised attachments.
- Never run engine unless park brake is locked.
- Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Replace all worn or damaged safety and instruction decals.
- To prevent fires, remove any buildup of grease, oil, or debris from the machine, especially the engine.
- Do not modify machine or safety devices. Unauthorized modifications may impair its function and safety.
- Do not wear radio or music headphones while servicing the machine. Safe service requires your full attention.
- Disconnect battery ground cable(s) (-) on the machine or remove attachment from machine before welding on the machine.

SAFETY

Prevent Fires

- Remove grass and debris from engine compartment and muffler area, before and after operating machine.
- Always shut off fuel when storing or transporting machine, if the machine has a fuel shutoff.
- Do not store machine near an open flame or source of ignition, such as a water heater or furnace.
- Check fuel lines, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.

Do Not Modify Machine

Do not make any unauthorized modifications to the machine in anyway.

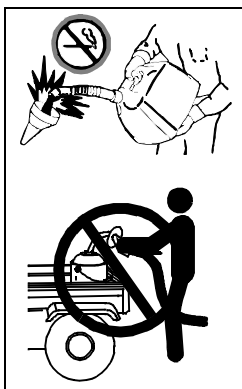
Modifications can result in making the machine unstable, increasing the possibility of rollover causing severe bodily injury or death.



Tire Safety

Explosive separation of a tire and rim parts can cause serious injury or death:

- Do not attempt to mount a tire without the proper equipment and experience to perform the job.
- Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.
- When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly.
- Check tires for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts.



Handling Fuel Safely

To avoid personal injury or property damage, use extreme care in handling fuel. Fuel is extremely flammable and fuel vapors are explosive:

- Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
- Use only approved non-metal, portable fuel containers. If using a

funnel, make sure it is plastic and has no screen or filter.

- Never remove the fuel tank cap or add fuel with the engine running. Allow engine to cool before refueling.
- Never add fuel to or drain fuel from the machine indoors. Move machine outdoors and provide adequate ventilation.
- Clean up spilled fuel immediately. If fuel is spilled on clothing, change clothing immediately. If fuel is spilled near machine, do not attempt to start the engine but move the machine away from the area of spillage. Avoid creating any source of ignition until fuel vapors have dissipated.
- Never store the machine or fuel container where there is an open flame, spark, or pilot light such as on a water heater or other appliance.
- Prevent fire and explosion caused by static electric discharge. Static electric discharge can ignite fuel vapors in an ungrounded fuel container.
- Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before fueling.
- Remove fuel-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment with a portable container, rather than from a fuel dispenser nozzle.
- Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until the fueling is complete. Do not use a nozzle lock-open device.
- Never overfill fuel tank. Replace fuel tank cap and tighten securely.
- Replace all fuel container caps securely after use.
- For gasoline engines, do not use gas with methanol. Methanol is harmful to your health and to the environment.

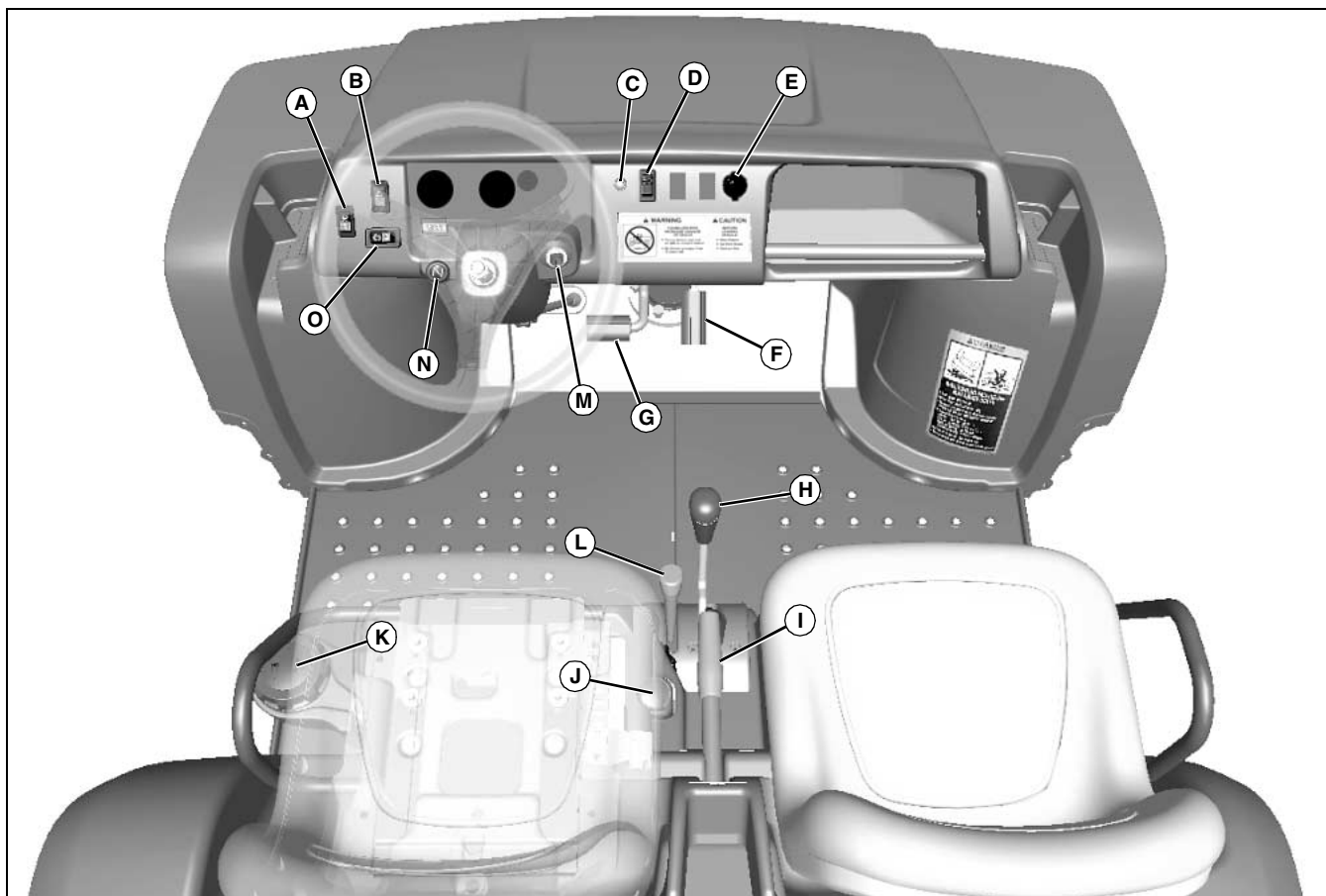
Handling Waste Product and Chemicals

Waste products, such as, used oil, fuel, coolant, brake fluid, and batteries, can harm the environment and people:

- Do not use beverage containers for waste fluids - someone may drink from them.
- See your local Recycling Center or authorized dealer to learn how to recycle or get rid of waste products.
- See your local Recycling Center or authorized dealer to learn how to put your machine out of service at the end of the machine's service life.

OPERATING CONTROLS

Operator Station Controls



MX40030a

- A - Cargo Box Power Lift Switch*
- B - Hazard Light Switch*
- C - Horn Switch*
- D - Headlight Switch
- E - 12 VDC Accessory Outlet
- F - Accelerator Pedal
- G - Brake Pedal
- H - Gear Shift Lever
- I - Park Brake Lever
- J - Fuel Gauge
- K - Fuel Tank Cap
- L - Traction Assis (Differential Lock) Lever
- M - Key Switch
- N - Choke Knob
- O - Turn Signal Switch*

*Optional Equipment

OPERATING

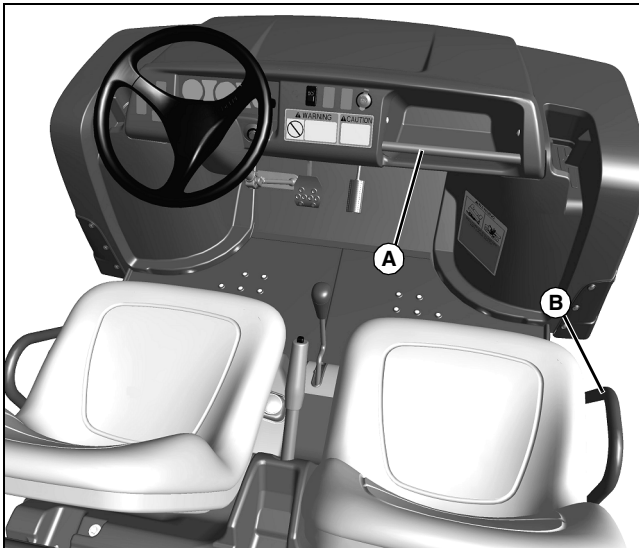
Daily Operating Checklist

- ☐ Test safety systems.
- ☐ Check tire pressure.
- ☐ Check fuel level.
- ☐ Check engine oil level.
- ☐ Tighten loose hardware.
- ☐ Remove debris from engine compartment, especially around brake linkage on each side of the transaxle.
- ☐ Check to make sure air intake is clean.
- ☐ Check area below machine for leaks.
- ☐ Check brakes and park brake operation.

Avoid Damage to Plastic and Painted Surfaces

- Do not wipe plastic parts unless rinsed first. Using a dry cloth may cause scratches.
- Insect repellent spray may damage plastic and painted surfaces. Do not spray insect repellent near machine.
- Be careful not to spill fuel on machine. Fuel may damage surface. Wipe up spilled fuel immediately.
- Prolonged exposure to sunlight will damage hood surfaces.

Using Hand Holds



MX43077

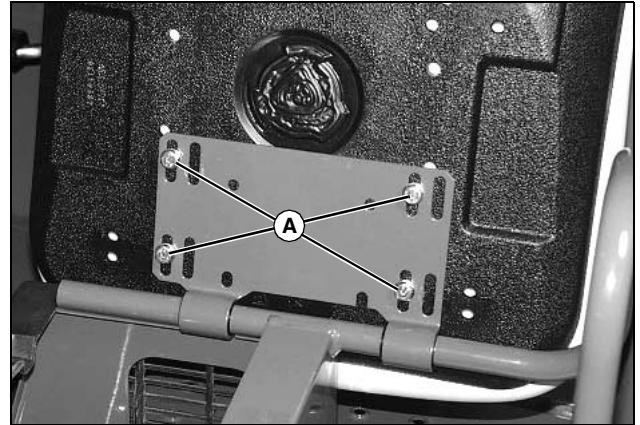
Hand holds are provided for passenger balance. When a passenger is present, they shall use both of the hand holds at all times while the machine is moving: the dash bar (A),

and the side rail (B) to the right of the seat.

Adjusting Standard Seat

1. Tip seat forward.

NOTE: If seat is removed, install seat hardware in the correct slots in the bracket. Always use set of slots closest to center of vehicle when installing seat.



MX33430

Picture Note: Passenger seat shown.

2. Hold onto seat and loosen cap screws (A).
3. Slide seat forward or rearward for desired position.
4. Tighten seat cap screws to 12.2 N•m (9 lb-ft).

Adjusting Driver Seat With Optional Lever System



CAUTION: Avoid injury! Never adjust seat while machine is moving. Stop machine before adjusting seat to prevent loss of machine control.

1. Stop machine and move transaxle shift lever to the neutral position.
2. Lock park brake.

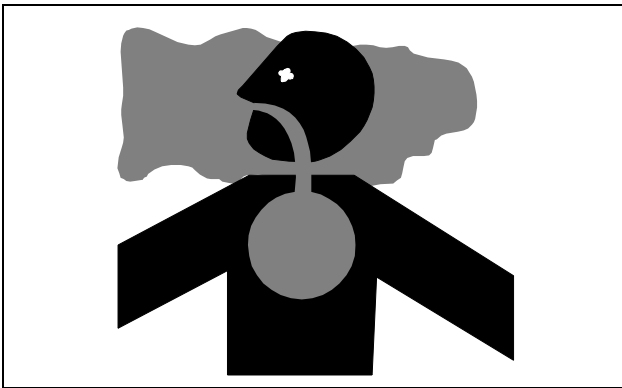
OPERATING



MX43076

3. Pull up on lever (A), and slide seat forward or rearward until seat locks in place.
4. Release lever.

Testing Safety Systems



CAUTION: Avoid injury! Engine exhaust fumes contain carbon monoxide and can cause serious illness or death.

Move the machine to an outside area before running the engine.

Do not run an engine in an enclosed area without adequate ventilation.

- **Connect a pipe extension to the engine exhaust pipe to direct the exhaust fumes out of the area.**
- **Allow fresh outside air into the work area to clear the exhaust fumes out.**

The safety systems installed on your machine should be checked before each machine use. Be sure you have read the machine operator manual and are completely familiar with the operation of the machine before performing these safety system checks.

Use the following checkout procedures to check for normal operation of machine.

If there is a malfunction during one of these procedures, do not operate machine. **See your authorized dealer for service.**

Perform these tests in a clear open area. Keep bystanders away.

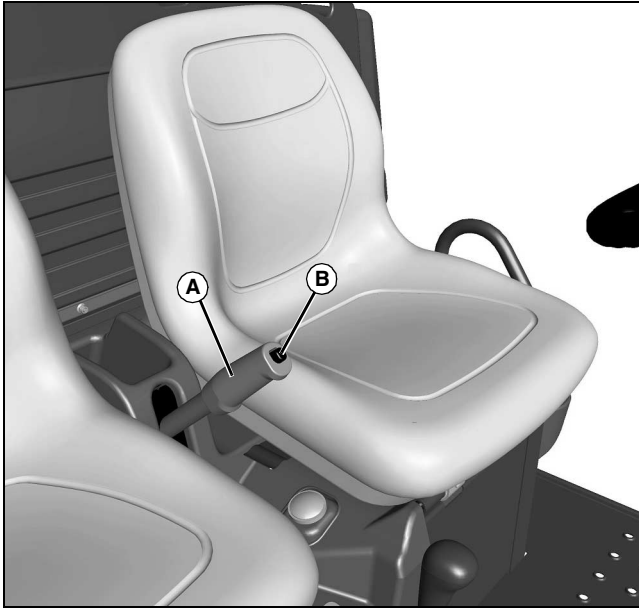
Testing the Safety Start System

1. Sit on the operator's seat.
2. Put key in STOP position.
3. Lock park brake.
4. Move gear shift lever to forward position.
5. Move key to start position. Engine should not crank. Turn key off.
6. Move gear shift lever to reverse position.
7. Move key to start position. Engine should not crank. Turn key off.

OPERATING

Using Park Brake

Locking the Park Brake:

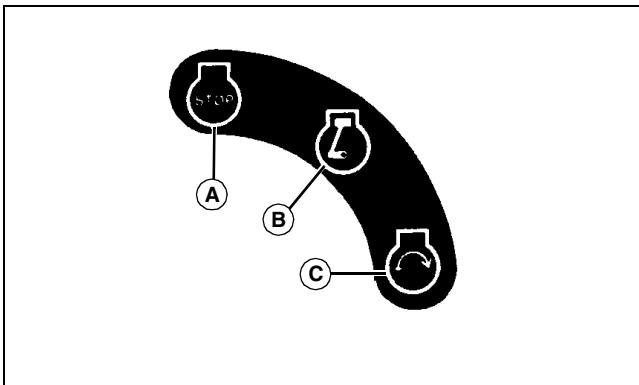


1. Push down on brake pedal to hold machine in place.
2. Pull up on lever (A) and lock lever into position engaging park brake.

Unlocking the Park Brake:

1. Push down on brake pedal to hold machine in place.
2. Pull up on lever (A).
3. Depress button (B).
4. Release lever down completely.

Using Key Switch



A - STOP Position - With key in STOP position, all switched power is off, and engine should not run.

B - ON Position - Turn key from STOP to ON position and

all switched power circuits will be energized, and machine is ready for use.

C - START Position - Used only for starting machine in neutral.

Using Headlights

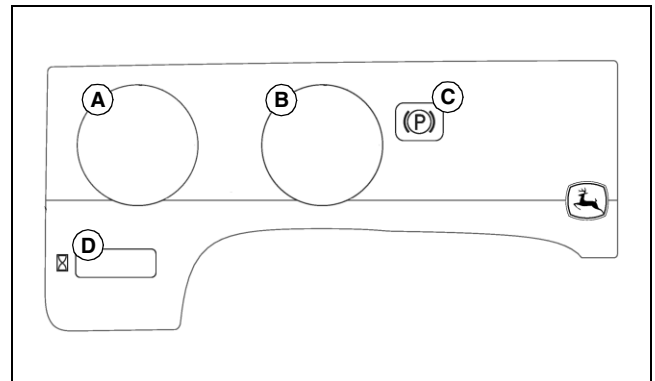
Ignition switch/Key must be in the run position to operate the lights. If the Ignition switch/key is in the run position and the engine is not running, the battery will discharge if the lights are allowed to remain on for an extended period of time.

- Press top of light switch to turn headlights on.

NOTE: Be sure to turn lights off and turn the ignition switch/key to STOP position, or lights will discharge battery.

- Press bottom of light switch to turn headlights off.

Using Instrument Panel



A - **Optional Voltmeter** - This gauge indicates system voltage. Indicator should be near center position while engine is running. If indicator is in either low or high (red) positions, stop engine and go through diagnostic procedures to repair problem.

B - **Optional Speedometer** - The speedometer indicates machine speed in Km/hr (mph).

C - **Park Brake Light** - This light will turn on when the key switch is in the on position, engine is running, and park brake lever is locked.

D - **Hour Meter** - The hour meter operates and displays when the engine is running. The hour meter shows the accumulated number of hours the engine has run. The hour meter is intended to provide a means of monitoring machine usage for maintenance purposes. Use the hour meter to determine when your machine has reached the recommended service intervals.

OPERATING

Using Accessory Outlet



CAUTION: Avoid injury! Safe operation requires your full attention. Do not wear radio or music headphones while operating machine.

NOTE: Accessory must be rated at 10 amps or less.

The accessory plug does not turn off with the key switch. Items connected to the accessory plug will continue to draw power, discharging the battery.

- Remove 12-volt outlet cover and install accessory cord in outlet.
- Install cover in outlet after use.

Using Optional Turn Signal Switch

NOTE: Turn signals will continue to flash when the ignition switch/key is in the STOP position, discharging the battery.

- Press at left end of turn signal switch to signal a left turn.
- Press at right end of turn signal switch to signal a right turn.
- Press at opposite end of turn signal switch until switch is centered to turn signal light off.

Using Optional Hazard Lights

NOTE: Hazard lights will continue to flash when the ignition switch/key is in the STOP position, discharging the battery.

- Press at top of hazard light switch to turn hazard lights on.
- Press at bottom of hazard light switch to turn hazard lights off.

Starting the Engine



CAUTION: Avoid injury! Engine exhaust fumes contain carbon monoxide and can cause serious illness or death.

Move the machine to an outside area before running the engine.

Do not run an engine in an enclosed area without adequate ventilation.

- Connect a pipe extension to the engine exhaust pipe to direct the exhaust fumes out of the area.
- Allow fresh outside air into the work area to clear the exhaust fumes out.

1. Sit on operator seat. Do not start engine at this time.
2. Push down on accelerator pedal to check free movement of pedal assembly. Release pedal.

NOTE: The machine has a neutral start safety switch. The engine will not crank unless the gear shift lever is in N (Neutral) position.

3. Verify that transaxle shift lever is in N (Neutral) position.
4. Verify that park brake is locked.



CAUTION: Avoid injury! Do not start engine by shorting across starter terminals. Bypassing normal circuitry will allow vehicle to start in gear.

Never start engine while standing on ground. Start engine only from operator's seat.

5. Turn key switch to the ON position.

IMPORTANT: Avoid damage! Open the choke by pushing the knob in to its full off position as soon as possible. Running the engine with the choke on beyond the warm up period may lead to plug fouling.

NOTE: The choke is designed with a snap and seal option and can be utilized for maximum weather protection such as pressure washing or inclement weather. Under normal use this feature does not necessarily need to be used. Push in fully to snap and seal the knob. Pull out to unseal the knob for normal operation.

6. Pull the choke knob out fully if engine is cold.
7. Turn key to start position.
8. Push choke in as needed to obtain a stable engine idle and push knob all the way in once the engine is running

OPERATING

smoothly.

IMPORTANT: Avoid damage! Starter may be damaged if starter is operated for more than 20 seconds at a time:

- **Wait two minutes before trying again if engine does not start.**

9. Release key to the ON position when engine starts.
 - If engine does not start within five seconds, turn key to off and wait ten seconds before trying to start again.
 - In very cold conditions, attempt starting engine three times only, then wait 5 minutes before trying again. This will allow time for starter to cool and prevent damage to starter.
10. Push in on the choke.

IMPORTANT: Avoid damage! Do not operate the engine at full throttle or under load until engine has warmed up, or engine damage could occur.

11. Run engine at half speed for 2 or 3 minutes to warm the engine.

Stopping Engine



CAUTION: Avoid injury! Children or bystanders may attempt to move or operate an unattended machine.

Always lock the park brake and remove the key before leaving the machine unattended.

IMPORTANT: Avoid damage! Do not stop engine immediately after hard or extended operation. Keep engine running at low idle for about 2 minutes to prevent heat build-up.

1. Release accelerator pedal and apply brake pedal to stop machine.
2. Move transaxle shift lever to N (Neutral) position.
3. Lock park brake.
4. Turn key switch to STOP position.
5. Remove key.

Emergency Stopping

1. Remove foot from travel pedal or accelerator pedal.
2. Depress brake pedal. Do not release brake pedal until all

moving parts have stopped.

3. If possible, lock the park brake.
4. Turn key switch to the STOP position.

Using Travel Controls

1. Push down brake to stop vehicle.
2. Allow engine to come to a low idle speed.

IMPORTANT: Avoid damage! Do not shift gears when vehicle is moving or with engine running above low idle speed. Push down brake to stop vehicle motion and engage shift lever with a firm positive action.

Gears may grind when shifting if engine idle speed is set higher than factory specification.

3. Select a gear position:
 - Forward - Push shift lever forward to forward gear.
 - Neutral - Push shift lever to center (neutral) position.
 - Reverse - Push shift lever rearward to reverse gear.
4. Use the traction assist as needed.
5. Look in the direction the vehicle will travel.



CAUTION: Avoid injury! Reduce speed before braking or turning, when hauling loads, and while operating around obstacles or on hazardous off-road conditions.

6. Push down accelerator pedal slowly and smoothly to begin vehicle travel.
7. Release accelerator and apply brake pedal evenly and firmly to slow down or stop.

Using Traction Assist (Differential Lock)

Traction assist is a differential lock system which provides better traction to the rear wheels when needed. Engaging the traction assist will cause both rear wheels to turn together at equal speed.

On the TH 6x4 model, the traction assist light will turn on when the traction assist lever is engaged and the differential lock system within the transaxle is engaged. Traction assist light will go out when lever is disengaged, and the differential lock system within the transaxle is disengaged.

OPERATING



CAUTION: Avoid injury! Driving at high speed with the traction assist engaged may result in loss of steering control. Do not engage traction assist while operating vehicle at speeds in excess of 16 km/h (10 mph).

Turning with the traction assist engaged increases the turning radius of the machine. Do not turn with the traction assist engaged while operating vehicle at speeds in excess of 16 km/h (10 mph).

Engaging the Traction Assist:

IMPORTANT: Avoid damage! Using the traction assist function improperly can damage the transaxle:

- Reduce speed and allow drive wheels to rotate at same speed before engaging or disengaging traction assist.
- Disengage traction assist when driving on dry asphalt or concrete.
- Use traction assist only when necessary for improved ground engagement.

1. Stop or reduce engine speed to 1/3 throttle or less.
2. Push traction assist lever forward to locked position.
 - Traction assist will remain engaged as long as lever is forward.

Disengaging the Traction Assist

1. Pull lever rearward to unlocked position.
2. Drive the vehicle straight ahead at a constant speed.
3. Reduce engine speed to 1/3 throttle or less.

Using the Cargo Box



CAUTION: Avoid injury! Seating is provided for the operator and one passenger. Do not allow riders in the cargo box or on the tailgate. Extra riders can fall off and be seriously injured or killed.

Raising and Lowering with Manual Lift (Machines Without Cabs)

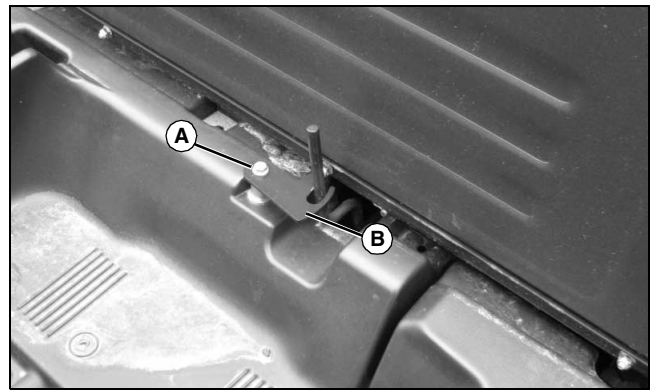


CAUTION: Avoid injury!

Park machine on a level surface and lock park brake before manually raising and securing cargo box in raised position.

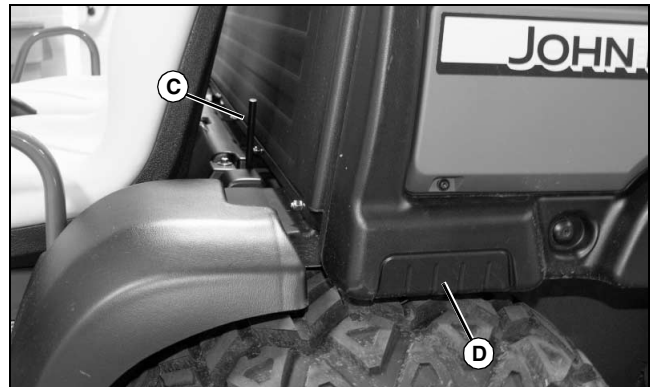
A cargo box containing material can be heavy. Empty some or all material until cargo box can safely be raised manually.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Empty cargo box by hand.



MX27369

3. Loosen bolt (A) and disengage cargo box lock (B).



MX27353

4. Release latch (C) by pulling latch towards handle (D) on cargo box. Allow lift cylinder to raise cargo box.
5. Engage lock and tighten bolt after fully lowering cargo box. Tighten bolt.

OPERATING

Raising and Lowering with Manual Lift (Machines with Cab)

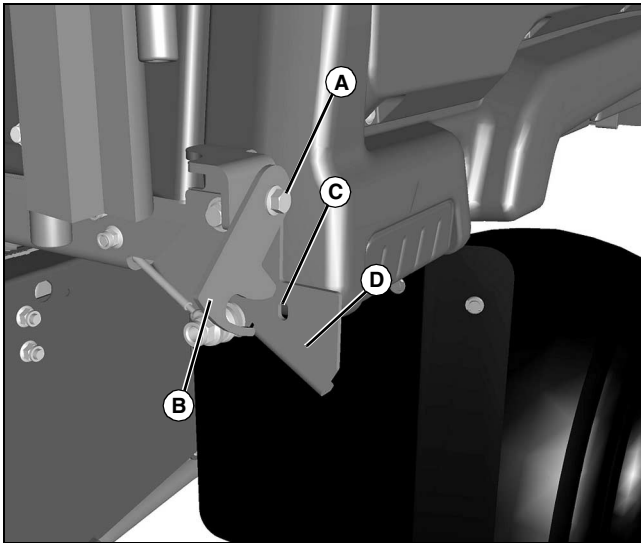


CAUTION: Avoid injury!

Park machine on a level surface and lock park brake before manually raising and securing cargo box in raised position.

A cargo box containing material can be heavy. Empty some or all material until cargo box can safely be raised manually.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Empty cargo box by hand.



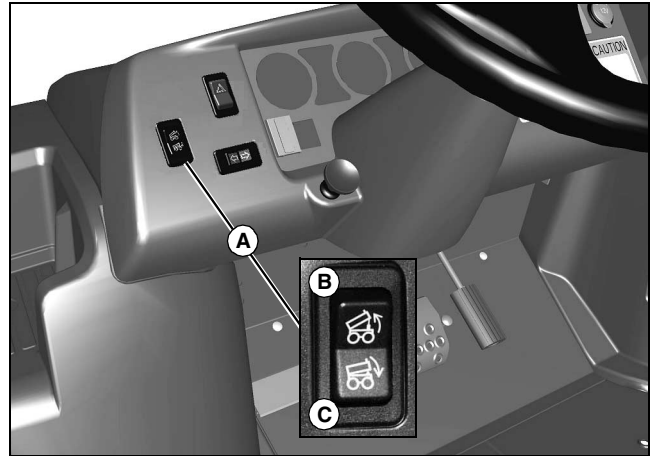
MX43476

3. Loosen bolt (A) and rotate locking plate (B) out of slot (C) on handle (D). Pull up on handle to release the latch. Allow lift cylinder to raise cargo box.
4. Rotate locking plate into slot on handle after fully lowering the cargo box. Tighten bolt.

Raising and Lowering with Power Lift

IMPORTANT: Avoid damage! A “clicking” or “ratcheting” sound when cargo box is fully raised or lowered or when box is heavily loaded indicates actuator clutch slippage. To prevent unnecessary wear or damage, keep clutch slippage to a minimum. Do not operate the Power Lift actuator beyond full stroke or exceed the cargo box weight capacity.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Disengage cargo box lock if installed.
3. Turn key to on position.



MX30610, MX43071

4. The cargo box switch (A) is located on the left side of the instrument panel.
5. Raise cargo box by pressing and holding top of rocker switch (B). Release switch when box is at desired dump height or when reaching maximum height.
NOTE: Allowing the Power Lift actuator clutch to slip briefly (click or ratchet) after cargo box is fully lowered will help keep cargo box secure and reduce rattling caused by travel vibrations.
6. Completely lower cargo box by pressing and holding bottom of rocker switch (C).
7. Turn key to OFF position.

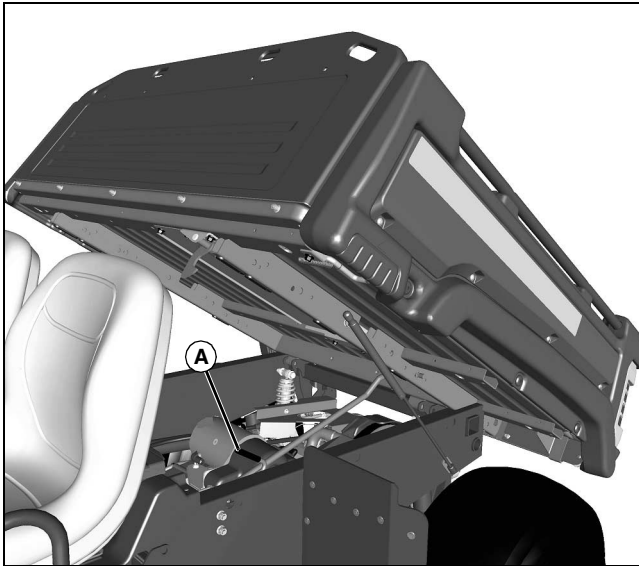
Locking Box in Raised Position



CAUTION: Avoid injury! Cargo box can fall if not secured properly. Remove key from ignition and lock support rod securely before doing any service under raised cargo box.

1. Raise the cargo box.

OPERATING



MX43070

2. Pull down on the cargo box slightly and push rod (A) in toward center of box to locked position.
3. Check to be sure box is locked in raised position.
4. To lower cargo box, lift rod up and slowly push cargo box downward until it latches in fully lowered position.

Operating the Tailgate

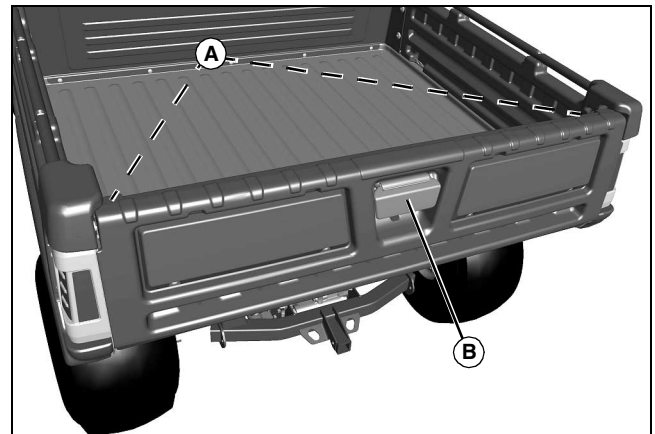


CAUTION: Avoid injury! Never operate tailgate with one lanyard attached (always use both).

Check condition of lanyards for wear or damage. Replace if cable is kinked or frayed.

IMPORTANT: Avoid damage! Do not attempt to tilt or dump cargo box when lanyards are detached. Tailgate damage from contact with hitch may result.

Keep lanyards attached when loading and unloading loose materials to avoid jamming material in the gap between the cargo box bed and tailgate.



MX43072

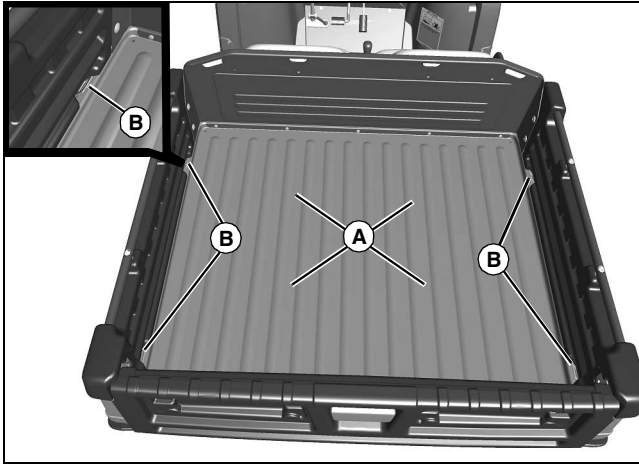
1. Check to be sure lanyards (A) are in place to support lowered tailgate.
2. Disconnect lanyards if you want to lower tailgate more than 90 degrees.

IMPORTANT: Avoid damage! Lower tailgate completely to unload cargo box only. Never drive with the tailgate hanging down. Tailgate can contact tires and cause damage.

3. Pull back on handle (B) to unlock and lower tailgate.
4. Before raising tailgate, check for stones and debris caught in the gap between the tailgate and cargo box floor. To remove debris:
 - a. Lock the cargo box in raised position.
 - b. Rotate the tailgate slightly to free debris, and brush out the gap.
 - c. Lower the cargo box.,
5. To raise tailgate, slowly push tailgate upward and lock into closed position.
6. Check to be sure tailgate is securely locked.

OPERATING

Using Cargo Box Tie Downs



MX42410

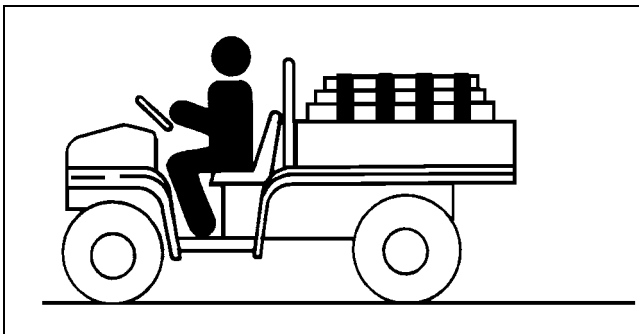
1. Arrange load so the weight is centered over the main cargo area (A).
2. Secure loads to the tie downs (B) in a safe and secure manner.

Loading the Cargo Box



CAUTION: Avoid injury! The utility vehicle may become unstable if the cargo box is loaded incorrectly. Avoid loose and shifting loads or uneven loading of material.

- Do not load above height of load guard.
- Securely anchor all loads in cargo box.
- Do not load beyond maximum capacity.



M78553

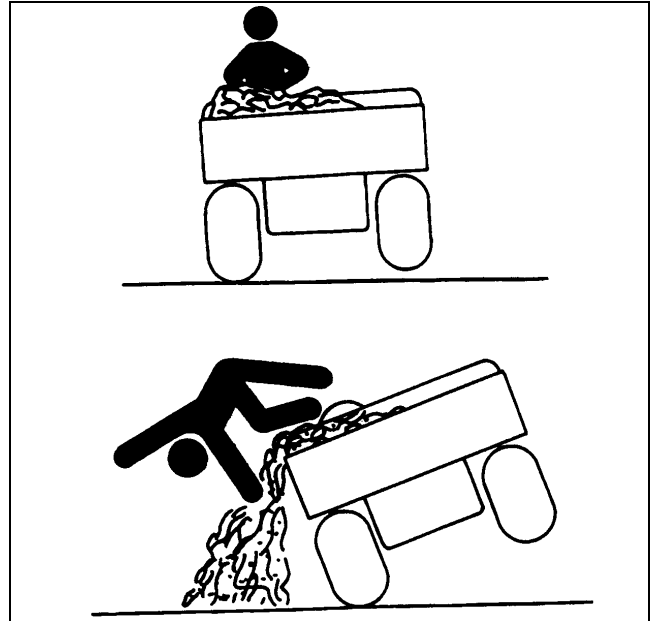
Maximum payload capacity on level terrain for the cargo box is 454 kg (1000 lb)

Reduce load by half when operating over rough, hilly, or steep terrain. Do not overload vehicle. Limit loads to those that can be safely controlled.

Reduce speed and exercise extreme caution when operating over rough, hilly, or steep terrain.

Securely anchor and evenly distribute loads in cargo box, when loading objects into vehicle. Shifting loads will affect stability.

Do not load above load guard.



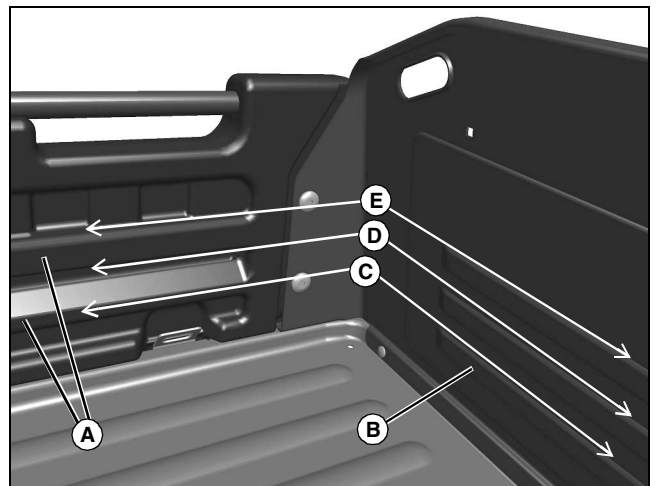
M78556

Avoid concentrated loads at rear or side of cargo box to prevent vehicle from tipping over. Be sure load is evenly distributed.

Because there is a big difference in weight between dry and wet sand, the only way of getting true weight of the load you are carrying is by using a scale.

Printed weight is normally on bagged and other material.

Box Volume Capacity



MX42409

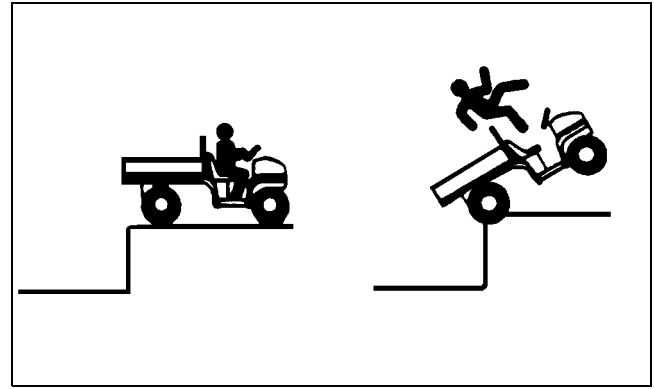
Use rub rails (A) in left and right side panels, and form beads (B) in cargo box front panel to determine cargo box volume.

OPERATING

- 101 cm (4 in.) load height (C) = 150 L (5.3 cu ft).
- 152 cm (6 in.) load height (D) = 226 L (8 cu ft).
- 203 cm (8 in.) load height (E) = 303 L (10.7 cu ft).

NOTE: Use table below to determine height of common cargo box materials.

Material	Weight (lb/ft ³)	Capacity Height
Asphalt	45	12
Brick	120	6
Cement (Dry)	94	8
Sand (Dry)	100	7
Sand (Damp)	120	6
Sandstone (Broken)	94	8
Concrete (Set/Mix)	135	5
Soil (Dry/Loose)	78	9
Soil (Wet/Packed)	100	7
Clay (Dry/Lump)	67	11
Clay (Wet/Lump)	100	7
Fertilizer	60	12
Gravel (1/4 - 2 in.)	105	7
Turf/Sod	35	12



M78552

1. Back up vehicle to dump site.
2. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
3. Open tailgate.

IMPORTANT: Avoid damage! Stop emptying immediately if actuator clutch slippage occurs. Lower cargo box completely and remove excess load by hand before dumping.

4. Raise cargo box to dump load.
5. Lower cargo box when empty.
6. Close tailgate. Do not drive vehicle with cargo box in raised position.

Emptying Cargo Box



CAUTION: Avoid injury! Raising a loaded cargo box changes the center of gravity. Keep vehicle a safe distance from the edge of ravine or drop-off when raising cargo box to empty.

A loaded cargo box can be very heavy. Do not attempt to manually raise a loaded cargo box. Unload cargo box before raising it by hand.



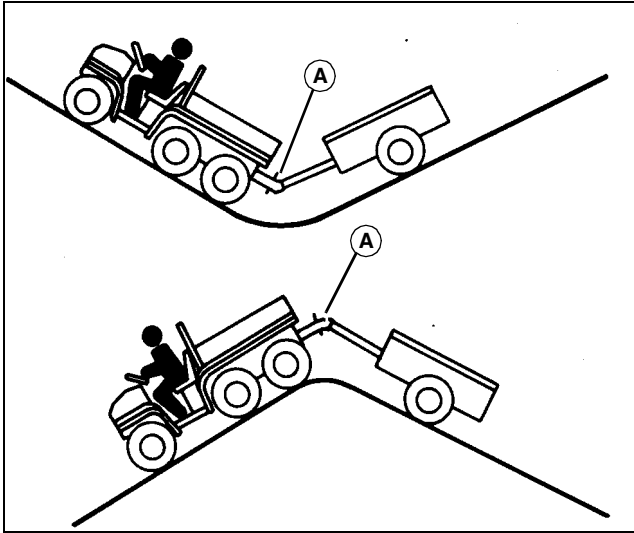
CAUTION: Avoid injury! Excessive towed load can cause loss of traction and loss of control on slopes. Stopping distance increases with speed and weight of towed load.

Do not tow a load that exceeds the maximum allowable towing load for this vehicle, as specified in this operator's manual.

- To provide adequate braking ability and traction, weight of towed load (trailer + cargo) must never exceed the vehicle payload (operator + passenger + cargo box load).
- DO NOT tow a load that exceeds 635 kg (1400 lb):
- DO NOT exceed a tongue weight of 45 kg (100 lb).
- Never exceed 16 km/h (10 mph) when towing a load. Tow load at a speed slow enough to maintain control.

OPERATING

IMPORTANT: Avoid damage! Extreme angles such as high railroad crossings can place high bending loads on hitch connection (A). Traversing terrain where the preceding conditions exist, use a ball type hitch.



W00934, W00935

- Always use approved hitch and hitch point provided for the utility vehicle. DO NOT modify the hitch or hitch point in any way.

Using Correct Tires and Inflation

See tire descriptions and inflation pressures in SPECIFICATIONS.

Tires



CAUTION: Avoid injury! Help prevent severe bodily injury or death, failure to observe these recommendations may result in loss of stability and operator control.

Use of John Deere approved original equipment or optional equipment is recommended. To ensure maximum machine performance and ride quality, do not mix size, type, or placement of tires. Failure to place tires per the guidelines could result in reduced machine performance, diminished traction and poor handling.

Inflation



CAUTION: Avoid injury! Explosive separation of tire and rim parts is possible when they are serviced incorrectly:

- Do not attempt to mount a tire without the proper equipment and experience to perform the job.
- Do not inflate the tires above the recommended pressure.
- Do not weld or heat a wheel and tire assembly. Heat can cause an increase in air pressure resulting in an explosion. Welding can structurally weaken or deform the wheel.
- Do not stand in front or over the tire assembly when inflating. Use a clip-on chuck and extension hose long enough to allow you to stand to one side.

IMPORTANT: Avoid damage! Over inflation may damage tires and diminish ride quality. Under inflation could cause wheel damage when riding over rough terrain.

An accurate low pressure gauge is available at your John Deere dealer.

Using Tire Chains

IMPORTANT: Avoid damage! Loose tire chains can cause machine damage. Periodically check chain tightness and adjust as necessary.

Chains are available for two rear wheels only from your John Deere dealer.

Transporting Vehicle

Towing the Vehicle

IMPORTANT: Avoid damage! Towing is not recommended. If towing is necessary, tow in the neutral position, and never tow the vehicle above 25 km/h (15.5 mph). Towing a vehicle at speeds above 25 km/h (15.5 mph) will result in transaxle damage. To avoid damage, haul the vehicle on a heavy-duty trailer or on a full-size truck.

Never use a car type dolly with the front wheels on the dolly.

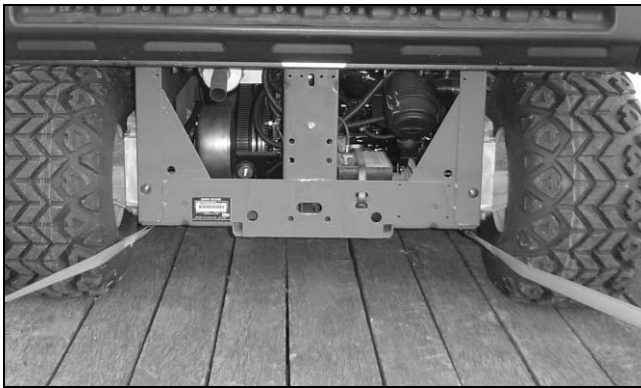
OPERATING

Vehicle Tie Down Locations



MX27354

Picture Note: On the front of the machine, route straps or chains over the arms and under the frame as shown.

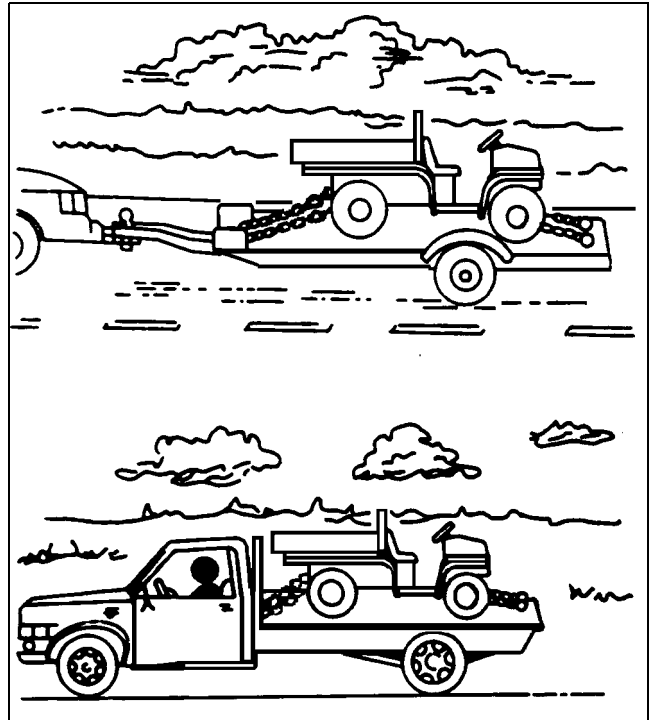


MX27356

Picture Note: On the rear of the machine, attach straps or cables to the corners of the frame as shown.

Hauling the Vehicle

NOTE: Space limitations may vary from one truck manufacturer to another. Short bed trucks do not have the necessary length requirement to accommodate the machine.



M78557

1. Back utility vehicle onto the trailer or truck.
2. Leave transaxle shift lever in forward or reverse gear.
3. Park vehicle safely. (See Parking Safely in the SAFETY section.)
4. Fasten vehicle to trailer or truck with straps, chains, or cables.
5. Equip the trailer or truck with all the necessary lights and signs required by local, state, provincial, or federal laws.
6. Remove or secure optional attachments, if equipped.

REPLACEMENT PARTS

Service Literature

If you would like a copy of the Parts Catalog or Technical Manual for this machine call:

- **U.S. & Canada:** 1-800-522-7448.
- **All Other Regions:** Your John Deere dealer.

Parts

We recommend John Deere quality parts and lubricants, available at your John Deere dealer.

Part numbers may change, use part numbers listed below when you order. If a number changes, your dealer will have the latest number.

When you order parts, your John Deere dealer needs the serial number or product identification number (PIN) for your machine or attachment. These are the numbers that you recorded in the Product Identification section of this manual.

Order Service Parts Online

Visit <http://JDParts.deere.com> for your Internet connection to parts ordering and information.

Part Numbers

ITEM	PART NUMBER
Engine Oil Filter	AM107423
Air Filter Element	M113621
Fuel Filter	AM116304
Spark Plug	M138938
Drive Belt	M150046
Fuses:	
10 Amp	57M7121
15 Amp	99M7065
20 Amp	57M7120
25 Amp	99M7069
30 Amp	57M7146
40 Amp	99M7104
Battery	TY25221

ITEM	PART NUMBER
Head Lamp Assembly	VGA10008
Head Lamp Bulbs	AM118013
Instrument Panel Lamps	AR62407
Backup Light Bulb	R133301
Brake/Taillight Bulb	R133302
Turn Signal Light Bulb	57M10180

(Part numbers are subject to change without notice. Part Numbers may be different outside the U.S.A.)

SERVICE INTERVALS

Servicing Your Machine

IMPORTANT: Avoid damage! Operating in extreme conditions may require more frequent service intervals:

- Engine components may become dirty or plugged when operating in extreme heat, dust or other severe conditions.
- Engine oil can degrade if machine is operated constantly at slow or low engine speeds or for frequent short periods of time.

Please use the following timetables to perform routine maintenance on your machine.

Break In

After First 8 Hours:

- Check and tighten rear wheel bolts to correct torque.
- Change engine oil and filter.

Every 50 Hours or Annually (whichever comes first)

- Grease fittings (front spindles and transaxle couplers).
- Check drive chain tension.
- Lubricate drive chain.
- Grease cargo box tailgate strikers.

Every 100 Hours or Annually (whichever comes first)

- Change engine oil and filter.
- Check transaxle oil level.

Every 200 Hours or Annually (whichever comes first)

- Change spark plug.
- Change air cleaner element.
- Check air cleaner dust unloading valve.
- Change fuel filter.
- Check spark arrestor.
- Check drive belt condition.

- Check driven clutch wear buttons.
- Inspect battery; clean if necessary.
- Check and tighten wheel bolts to correct torque.
- Check and tighten hardware.
- Inspect cargo box tailgate lanyards. Replace if kinked or frayed.

Every 200 Hours

- Adjust engine valve clearance (see your John Deere dealer for service).

Every 800 Hours or 24 Months

- Change transaxle oil.
- Replace drive belt.

SERVICE LUBRICATION

Grease

IMPORTANT: Avoid damage! Use recommended John Deere greases to avoid component failure and premature wear.

The recommended John Deere greases are effective within an average air temperature range of -29 to 135 degrees C (-20 to 275 degrees F).

If operating outside that temperature range, contact your Servicing dealer for a special-use grease.

The following greases are preferred:

- John Deere Multi-Purpose SD Polyurea Grease
- John Deere Multi-Purpose HD Lithium Complex Grease

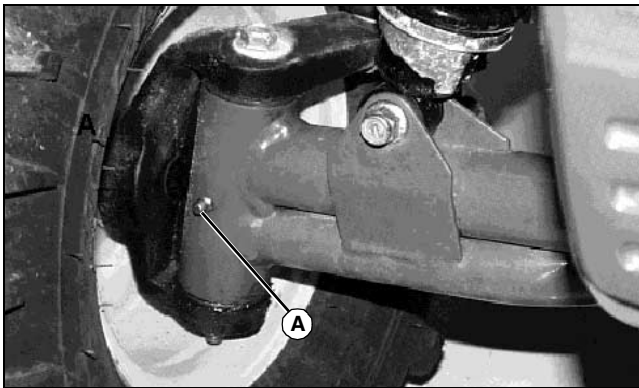
If not using any of the preferred greases, be sure to use a general all-purpose grease with an NLGI grade No.2 rating.

Wet or high speed conditions may require use of a special-use grease. Contact your Servicing dealer for information.

Chain Lubricant

Use John Deere molybdenum disulfide (Moly) Chain & Cable Lubricant or an equivalent oil meeting John Deere specifications to lubricate drive chains. In dry dusty conditions, use of a dry lube is recommended.

Lubricating Front Spindles

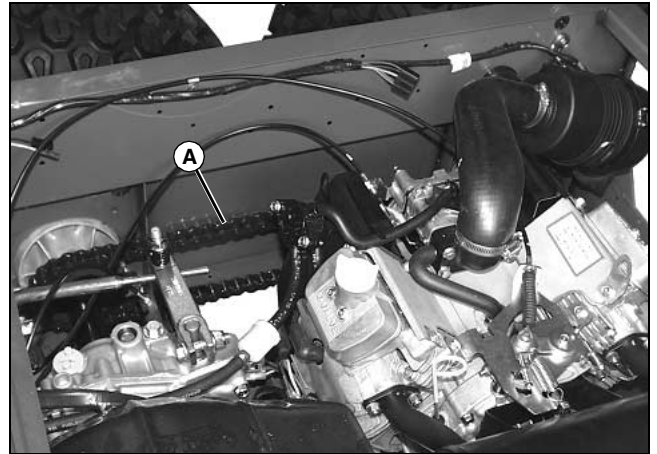


MX4657

Lubricate one grease fitting (A) on each spindle bushing with one or two shots of grease.

Lubricating Drive Chain

NOTE: Use a dry lubricant in dusty conditions. (See your authorized dealer.)

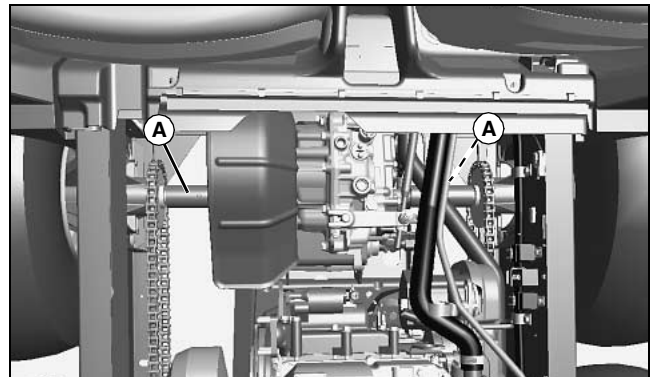


MX33297

Apply chain lubricant to chain (A) at each side of vehicle. Lubricate the entire surface of the chain.

Lubricating Transaxle Couplers

IMPORTANT: Avoid damage! Wipe excess grease from coupler at transmission end. Excess grease can contaminate belt and cause it to slip.

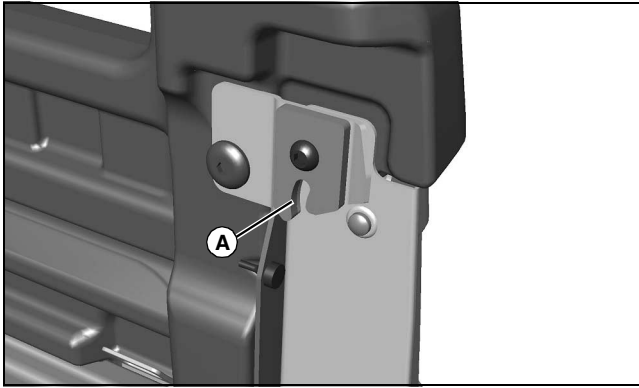


MX37147

Lubricate one grease fitting (A) on each transaxle coupler with one or two shots of grease.

SERVICE LUBRICATION

Lubricating Cargo Box Tailgate Strikers



MX27349

1. Open the tailgate.
2. Apply recommended grease to the inside surface of the strikers (A) on both sides of the cargo box.

SERVICE ENGINE

Avoid Fumes



CAUTION: Avoid injury! Engine exhaust fumes contain carbon monoxide and can cause serious illness or death.

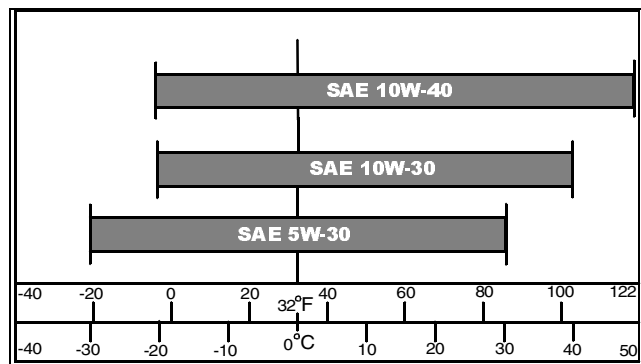
Move the machine to an outside area before running the engine.

Do not run an engine in an enclosed area without adequate ventilation.

- Connect a pipe extension to the engine exhaust pipe to direct the exhaust fumes out of the area.
- Allow fresh outside air into the work area to clear the exhaust fumes out.

Engine Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.



The following John Deere oils are preferred:

- TURF-GARD™
- PLUS- 4™

Other oils may be used if above John Deere oils are not available, provided they meet the following specification:

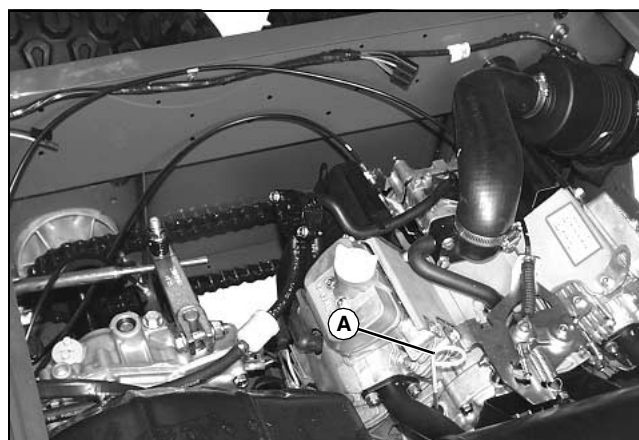
- API Service Classification SJ or higher

Checking Engine Oil Level

IMPORTANT: Avoid damage! Failure to check the oil level regularly could lead to serious engine problems if oil level is out of the operating range:

- Check oil level before operating.
- Check oil level when the engine is cold and not running.
- Keep oil level between the dipstick marks.
- Shut off engine before adding oil.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.



MX33297

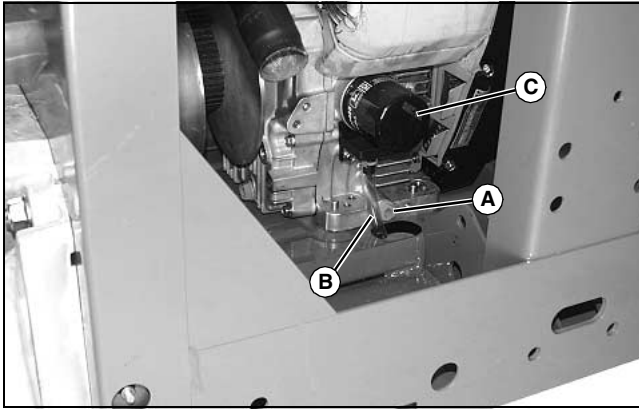
3. Check oil level:
 - a. Remove and wipe dipstick (A) clean.
 - b. Install dipstick. Remove and check oil level.
4. When checking oil level:
 - Oil level must be between upper and lower fill marks on dipstick.
 - If oil level is below lower mark on dipstick, add oil to bring oil level no higher than upper mark on dipstick.
 - If oil level is above upper mark, drain to proper level. Determine cause of this condition and correct.
5. Install dipstick.
6. Lower the cargo box.

Changing Engine Oil and Filter

1. Run engine to warm the oil.
2. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
3. Raise and secure cargo box.

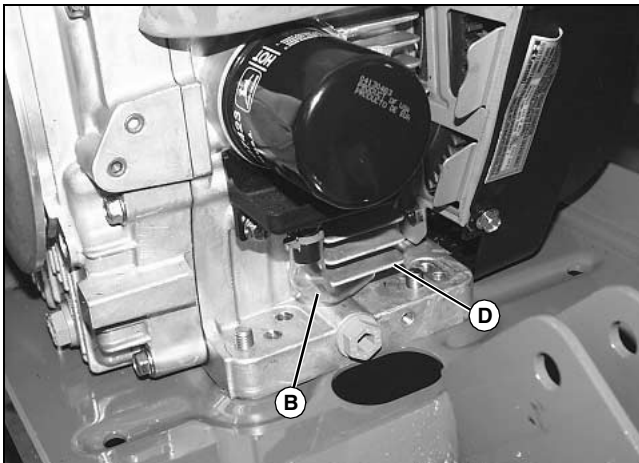
SERVICE ENGINE

4. Place drain pan under engine drain plug.
5. Clean any debris from oil filter.



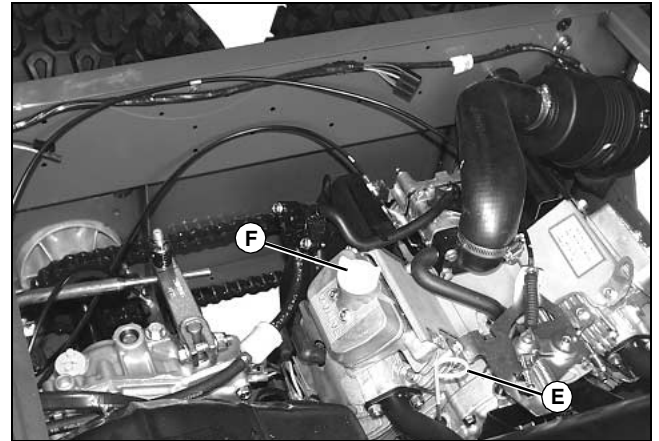
MX33441

6. Remove drain plug (A) on the rear side of engine and drain oil into oil drain pan. Allow oil to drain completely.
7. Guide drain hose (B) into bottom drain hole in frame.
8. Remove and discard oil filter (C) on rear of engine. Wipe off filter base on engine.
9. Put a light coat of clean engine oil on gasket of new oil filter.
10. Install new filter until rubber gasket contacts filter base. Tighten filter an additional one-half turn.
11. Install drain plug and tighten to 6.9 N•m (61 lb-in.).



MX33642

12. Raise bottom of drain hose (B) out of drain hole and secure tucked below bottom engine cooling fin (D).



MX33297

13. Add engine oil.
 - Remove oil fill cap (F) from filler opening.

IMPORTANT: Avoid damage! Do not overfill crankcase with oil. Oil capacities given are with engine and crankcase completely dry. Some oil will remain in engine after draining.

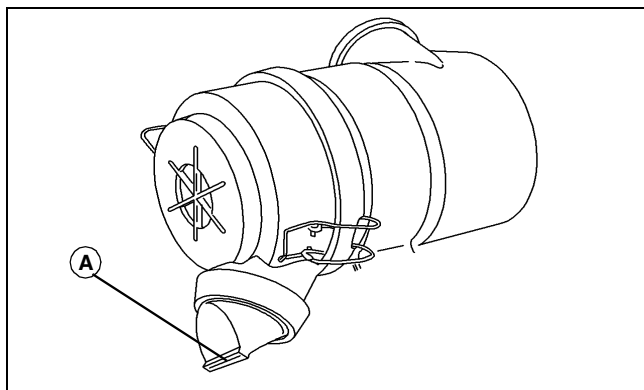
14. Add oil no higher than upper mark on dipstick (E). Do not overfill.
15. Install dipstick and oil fill cap (F).
16. Start and run engine at idle to check for leaks. Stop engine. Fix any leaks before operating.
17. Check oil level, add oil if necessary.
18. Lower the cargo box.

Cleaning Dust Unloading Valve

IMPORTANT: Avoid damage! Do not operate engine without air cleaner element and rubber dust unloading valve installed.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Allow engine to cool.
3. Access the engine compartment.

SERVICE ENGINE



MX22502

4. Squeeze dust unloading valve (A) to clean. Remove and replace if damaged.

Servicing Air Cleaner Element

IMPORTANT: Avoid damage! Dirt and debris can enter engine when air cleaner canister is opened. Do not open canister unless required for scheduled service. This will keep contamination of the intake system to a minimum.

Check filter element more frequently if operating in dusty conditions.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Allow engine to cool.
3. Raise and secure cargo box.



MX33298

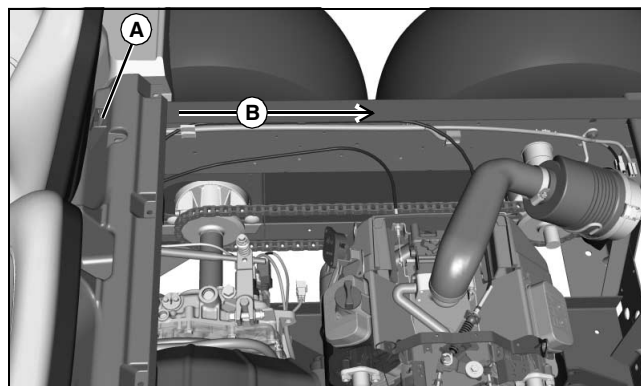
4. Release latches (A) and remove air cleaner canister cover (B).
5. Remove and discard filter element. Replace with a new filter element.
6. Install air cleaner canister cover with rubber dust unloading valve pointing downward. Check instruction molded into canister cover for proper installation.

7. Hook the canister cover latches.

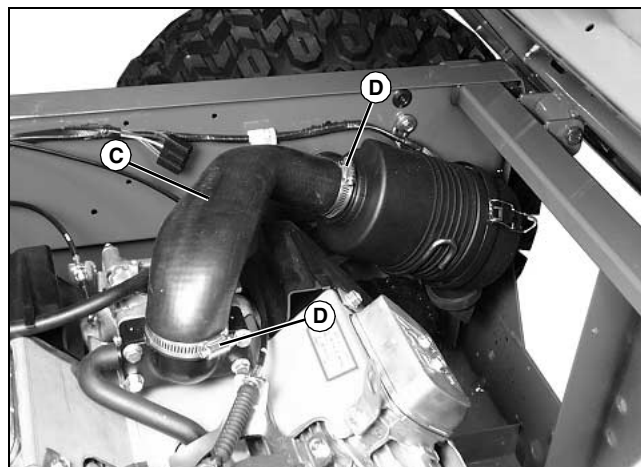
Checking Air Intake, Hoses and Clamps

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.

IMPORTANT: Avoid damage! Be sure air intake opening (A) behind passenger seat is clear from any obstructions. Opening should be clear, so channel (B) obtains adequate air supply for air intake system to work properly.



MX32940



MX33298

3. Check intake hose (C) for damage or cracking. Replace if necessary.
4. Check and tighten air intake hose clamps (D) (both sides of hose) as needed.
5. Lower the cargo box.

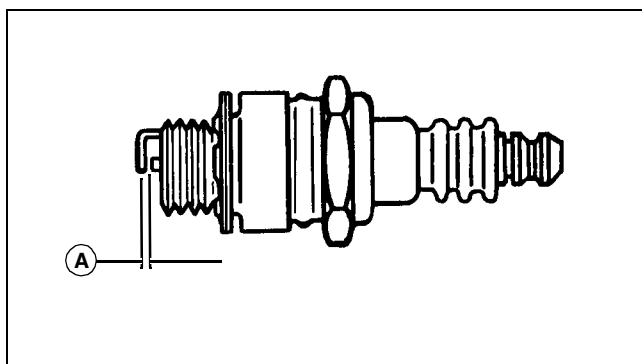
SERVICE ENGINE

Checking Spark Plug



CAUTION: Avoid injury! Touching hot surfaces can burn skin. The engine, components, and fluids will be hot if the engine has been running. Allow the engine to cool before servicing or working near the engine and components.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
 2. Raise and secure cargo box.
 3. Disconnect spark plug wire(s).
 4. Remove spark plug(s) using appropriate spark plug socket.
 5. Inspect spark plug(s) for:
 - Cracked porcelain.
 - Pitted or damaged electrodes.
 - Other wear or damage.
 6. Clean spark plug(s) carefully with a wire brush.
- NOTE:** In Canada, replace with resistor spark plug only.
7. Replace spark plug(s) if necessary.



M85200A

8. Check and adjust spark plug gap (A):
 - Gap must be 0.80 mm (0.031 in.).
9. Install and tighten spark plug(s). Tighten to 25 N•m (18 lb-ft).
10. Install spark plug wire(s).
11. Lower the cargo box.

Replacing Fuel Filter



CAUTION: Avoid injury! Fuel vapors are explosive and flammable:

- Do not smoke while handling fuel.
- Keep fuel away from flames or sparks.
- Shut off engine before servicing.
- Cool engine before servicing.
- Work in a well-ventilated area.
- Clean up spilled fuel immediately.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.



MX33297

3. Locate the fuel filter (A).
 4. Check element of fuel filter for debris. Replace if dirt or sediment is visible on element.
 5. Slide hose clamps away from the fuel filter.
 6. Place a drain pan or cloth under hoses to catch any fuel left in hoses.
 7. Disconnect hoses from the filter.
- NOTE:** Install fuel filter with arrow pointing in direction of fuel flow towards the engine.
8. Install new filter.
 9. Connect hoses to new filter.
 10. Install clamps.
 11. Lower the cargo box.

Adjusting Carburetor

NOTE: The carburetor is calibrated by the engine manufacturer and should not require any adjustments.

SERVICE ENGINE

If engine is operated at altitudes above 1829 m (6,000 ft.), some carburetors may require a special high altitude main jet. See your John Deere dealer.

If engine is hard to start or runs rough, check the TROUBLESHOOTING section of this manual.

After performing the checks in the troubleshooting section and your engine is still not performing correctly, contact your John Deere dealer.

Cleaning Engine Compartment



CAUTION: Avoid injury! Touching hot surfaces can burn skin. The engine, components, and fluids will be hot if the engine has been running. Allow the engine to cool before servicing or working near the engine and components.

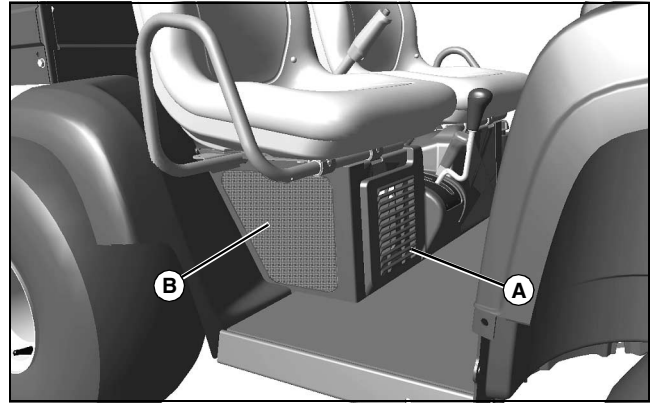
1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.

IMPORTANT: Avoid damage! Do not spray water on a hot engine or transaxle. Damage may occur to cast aluminum parts. Allow engine to cool before servicing.

3. Remove any debris in engine compartment.
4. Check and remove any obstructions around the control cables and linkages.

Cleaning Frame Screen and Intake Louver

IMPORTANT: Avoid damage! An obstructed air intake screen can cause engine damage due to overheating. Keep air intake screen and other external surfaces of the engine, including cooling fins, clean at all times to allow adequate air intake.

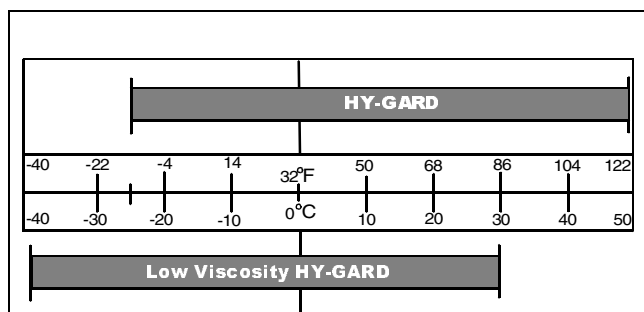


MX33581

1. Check screens (A) and (B) for dirt, grass clippings and debris.
2. Clean screens by washing or with a brush or cloth.

SERVICE TRANSMISSION

Transaxle Oil



Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere HY-GARD™ transmission and hydraulic oil is recommended for most normal operating temperatures.

NOTE: For temperatures below -13° C (0° F) John Deere low viscosity HY-GARD™ may be used. If used at temperatures above -13° C (0° F) some brake squeal may be heard due to lower viscosity of the oil at higher temperatures.

Other oils may be used if they meet John Deere standards JDM J20C and JDM J20D.

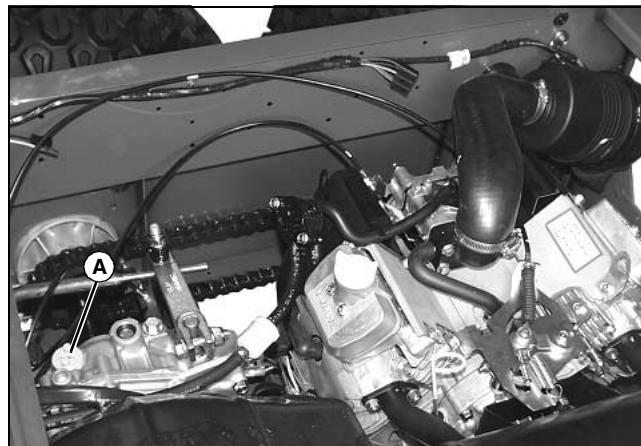
Checking Transaxle Oil Level

IMPORTANT: Avoid damage! Hot hydraulic oil will expand and show incorrect oil level. Check oil level:

- When oil is cold.
- With engine not running.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.

IMPORTANT: Avoid damage! Dirt and debris in oil may cause damage to the transaxle. Clean area around opening before removing dipstick.



MX33297

3. Remove dipstick (A) located on the top of the transaxle housing. Wipe dipstick clean.
4. Check oil level by setting dipstick on threads in transaxle case, then removing and checking oil level.
5. Add oil as needed through the dipstick fill hole.
6. Install and tighten dipstick.
7. Lower the cargo box.

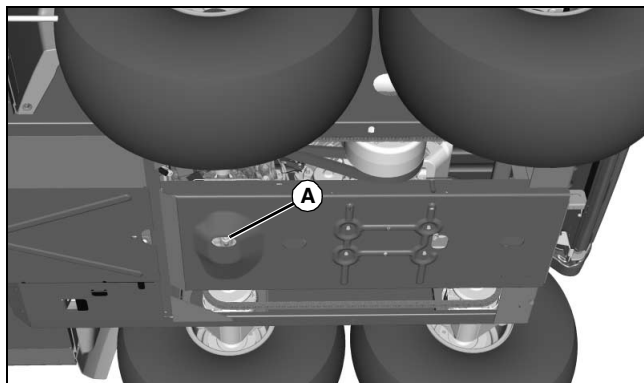
Changing Transaxle Oil

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.

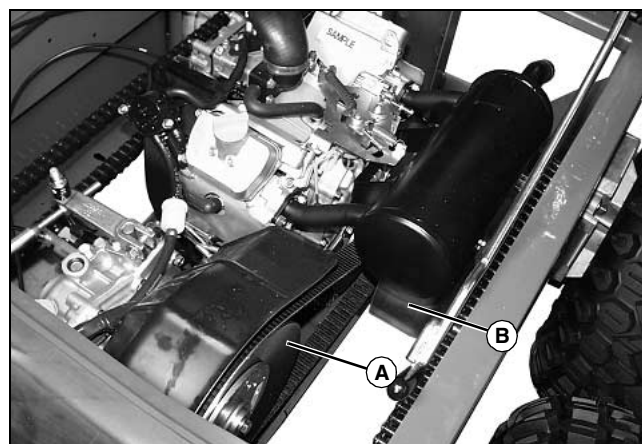
SERVICE TRANSMISSION

IMPORTANT: Avoid damage! Dirt and debris in oil may cause damage to the transaxle. Clean area around opening before removing plug or dipstick.

Be sure dipstick is installed before removing drain plug. Slowly remove dipstick after plug is removed to control rate of oil flow draining into drain pan.



MX27357



MX33442

3. Position drain pan under transaxle drain plug (A).
4. Remove plug and drain oil.
5. Check washer on drain plug. Replace if missing or in poor condition.
6. Install and tighten drain plug to 30 - 35 N•m (22 - 26 lb-ft).
7. Remove dipstick located on top of transaxle housing. Wipe dipstick clean.
8. Add oil: Start by adding approximately 4.7 L (5.0 qt).
9. Check oil level by setting dipstick on threads in transaxle case, then removing and checking oil level.
10. Wait for two minutes then check oil level. Add oil if necessary.
11. Install dipstick and tighten.
12. Lower the cargo box.

Replacing Drive Belt



CAUTION: Avoid injury! Rotating parts can catch fingers, loose clothing, or long hair. Wait for engine and all moving parts to stop before leaving operator's station to adjust or service machine.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.

3. Route the belt over pulley (A) of the driven clutch. Rotating the driven pulley will aid in removing the belt.
4. Route belt over drive pulley (B) to remove.
5. Install new belt by routing over drive pulley and then over the driven clutch pulley.
6. Lower the cargo box.

Checking Drive Chain Tension

NOTE: Drive chain is set taught at the factory and will not reach normal stretch limits until vehicle has experienced reasonable hours of operation.

1. Stop vehicle on level surface. Stop engine, but do not lock park brake.
2. Put transmission in neutral and traction assist in off position.

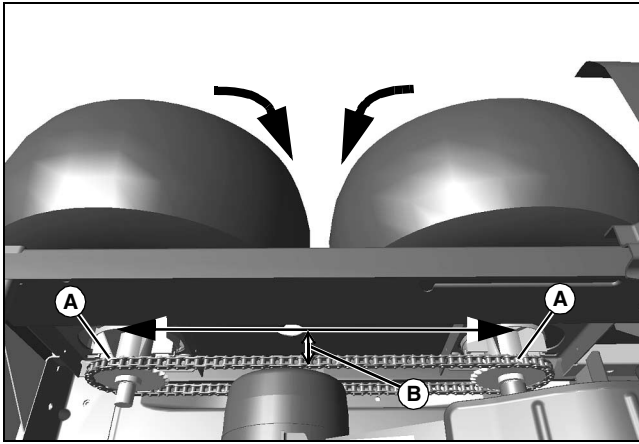


CAUTION: Avoid injury! The machine can fall or slip from an unsafe lifting device or supports.

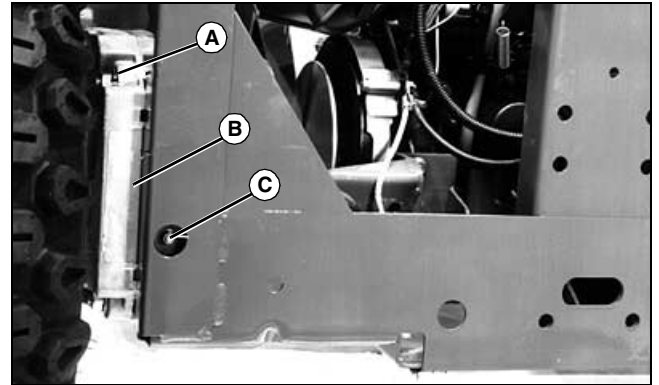
- Use a safe lifting device rated for the load to be lifted.
- Lower machine onto jack stands or other stable supports and block wheels before servicing.

3. Use a safe lifting device to raise all four rear wheels off ground. Place jack stands or wooden blocks under vehicle.
4. Raise and secure cargo box.

SERVICE TRANSMISSION



IMPORTANT: Avoid damage! Avoid stripping threads from adjustment bolt (C). Loosen housing nuts (A) before turning adjustment bolts.



5. Rotate rear wheels toward each other so that chain sag is at top of chain.

6. Place straight edge across top of sprockets (A) and measure distance (sag) (B) from bottom of straight edge to top of chain. Slack should be 13 to 25 mm (0.5 to 1.0 in.).

7. Adjust chain tension if necessary.

5. Loosen four nuts (A) for both axles so axle housings (B) can slide easily forward and rearward.

IMPORTANT: Avoid damage! Do not adjust chain too tightly or it could be damaged.

6. Turn adjustment bolts (C) at both sides to remove chain sag. Make sure chain tension is the same at both sides of vehicle.

7. Tighten axle housing nuts (A) to 90 N•m (70 lb-ft), then back off adjustment bolts (C) one half turn to relieve force on bolt.

8. Check for proper and equal chain tension at both sides of vehicle.

9. Rotate drive wheels approximately 120°. Check again at both sides of vehicle for equal chain tension, making sure no tight spots exist. Repeat two more times.

10. Remove jack stands and lower vehicle to ground.

Adjusting Drive Chain Tension



CAUTION: Avoid injury! Rotating parts can catch fingers, loose clothing, or long hair. Wait for engine and all moving parts to stop before leaving operator's station to adjust or service machine.

1. Park vehicle on a level surface. Stop engine, but do not lock park brake.

2. Put transmission in neutral and traction assist in off position.



CAUTION: Avoid injury! The machine can fall or slip from an unsafe lifting device or supports.

- Use a safe lifting device rated for the load to be lifted.
- Lower machine onto jack stands or other stable supports and block wheels before servicing.

3. Use a safe lifting device to raise all four rear wheels off ground. Place jack stands or wooden blocks under vehicle.

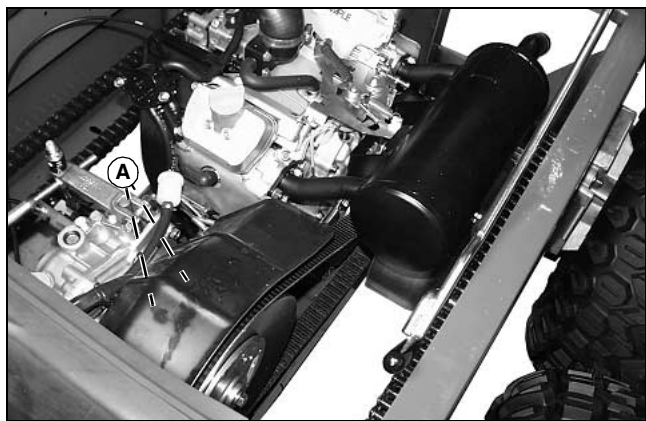
4. Raise and secure cargo box.

Checking Secondary Driven Clutch Buttons

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)

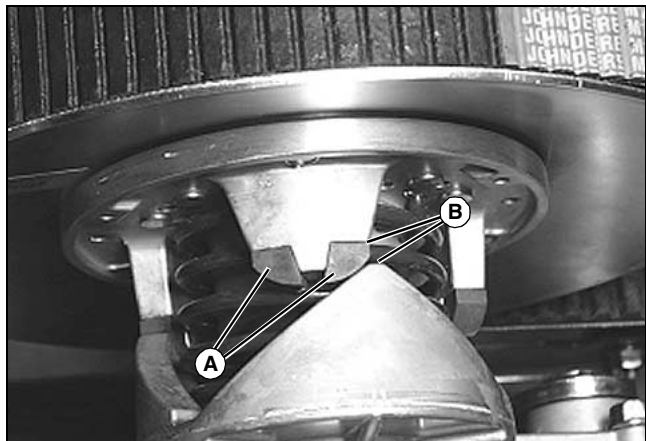
2. Raise and secure cargo box.

SERVICE TRANSMISSION



MX33442

3. Check for missing or worn clutch buttons (A).



MX33643

- There should not be any excessive wear on clutch buttons (A); replace before there is metal-to-metal (B) contact.
- If replacement is necessary, see your authorized dealer.

4. Lower the cargo box.

SERVICE ELECTRICAL

Service the Battery Safely



CAUTION: Avoid injury! The battery produces a flammable and explosive gas. The battery may explode:

- Do not smoke or have open flame near battery.
- Wear eye protection and gloves.
- Do not allow direct metal contact across battery posts.
- Remove negative cable first when disconnecting.
- Install negative cable last when connecting.

Checking the Battery (Sealed Batteries)

NOTE: Do not attempt to open, add fluid or service battery. Any attempt to do so will void warranty.

- Keep battery and terminals clean.
- Keep battery bolts tight.
- Keep small vent holes open.

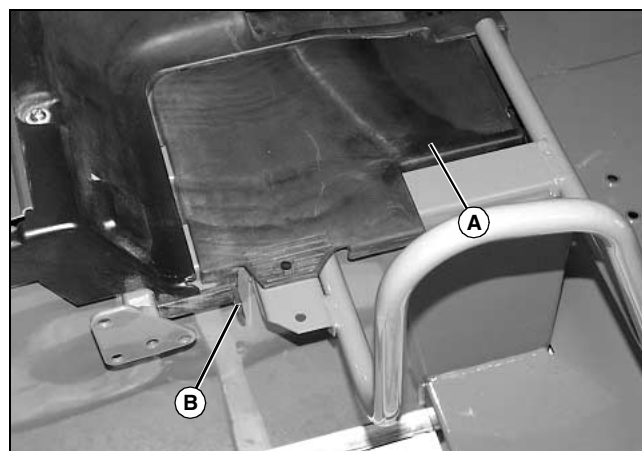
IMPORTANT: Avoid damage! This battery comes fully charged. If the machine is not used by the service expiration date indicated on the battery, charge the battery.

- Recharge, if necessary, at 6-10 amperes for 1 hour.

Removing and Installing Battery

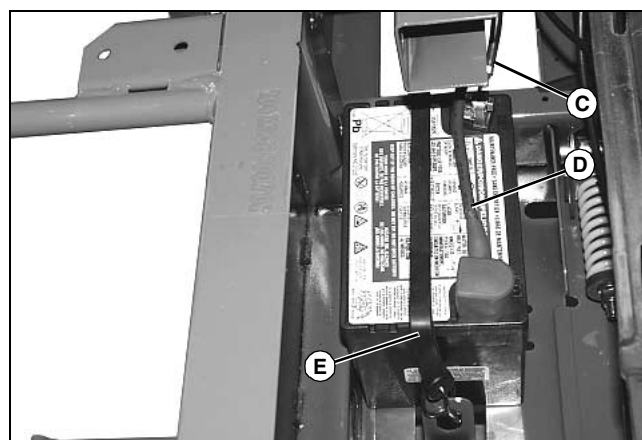
Removing

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)



MX33315

2. Locate service access panel (A) under passenger seat. Pull back on latch (B), and remove panel.



MX33294

3. Disconnect all black negative cables (C) from battery first.
4. Slide back rubber protective cover and disconnect all red positive cables (D).
5. Disconnect rubber hold-down strap (E).
6. Lift battery from vehicle.

Installing

1. Install battery into vehicle with negative (-) terminal positioned toward rear of vehicle.
2. Install battery hold-down strap.
3. Connect all red positive cables to positive (+) battery terminal first. Tighten the connections.
4. Connect all black negative cables to negative (-) battery terminal. Tighten the connections.
5. Apply spray lubricant to battery terminals to help prevent corrosion.
6. Slide protective cover down the battery positive cable and seat it over the positive (+) terminal.

SERVICE ELECTRICAL

7. Install service access panel, and lower passenger seat.

Cleaning Battery and Terminals

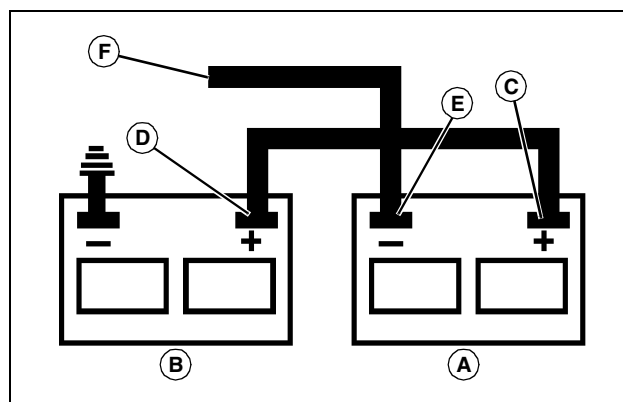
1. Park machine safely. (See Parking Safely in the SAFETY section.)
2. Disconnect and remove battery.
3. Wash battery with solution of four tablespoons of baking soda to one gallon of water. Be careful not to get the soda solution into the cells.
4. Rinse the battery with plain water and dry.
5. Clean terminals and battery cable ends with wire brush until bright.
6. Install battery.
7. Attach cables to battery terminals using washers and nuts.
8. Apply spray lubricant to terminal to prevent corrosion.

Using Booster Battery



CAUTION: Avoid injury! The battery produces a flammable and explosive gas. The battery may explode:

- Do not smoke or have open flame near battery.
- Wear eye protection and gloves.
- Do not jump start or charge a frozen battery. Warm battery to 16°C (60°F).
- Do not connect the negative (-) booster cable to the negative (-) terminal of the discharged battery. Connect at a good ground location away from the discharged battery.



M71044

A - Booster Battery

B - Disabled Vehicle Battery

1. Connect positive (+) booster cable to booster battery (A) positive (+) post (C).
2. Connect the other end of positive (+) booster cable to the disabled vehicle battery (B) positive (+) post (D).
3. Connect negative (-) booster cable to booster battery negative (-) post (E).

IMPORTANT: Avoid damage! Electric charge from booster battery can damage machine components. Do not install negative booster cable to machine frame. Install only to the engine block.

Install negative booster cable away from moving parts in the engine compartment, such as belts and fan blades.

4. Connect the other end (F) of negative (-) booster cable to a metal part of the disabled machine engine block away from battery.
5. Start the engine of the disabled machine and run machine for several minutes.

SERVICE ELECTRICAL

6. Carefully disconnect the booster cables in the exact reverse order: negative cable first and then the positive cable.

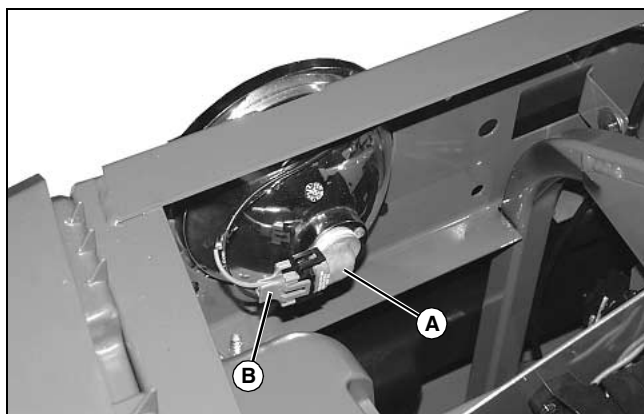
Replacing Headlight Bulb

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Remove hood, and locate headlight housing in the front frame.



CAUTION: Avoid injury! Halogen light bulb contains gas under pressure. The bulb may shatter if the glass is scratched or dropped. Wear eye protection and handle bulb with care when replacing.

IMPORTANT: Avoid damage! Do not touch glass portion of new bulb with bare skin. Contact with oils or dirt will reduce bulb life. Handle bulb by the base or with a clean cloth or gloves.



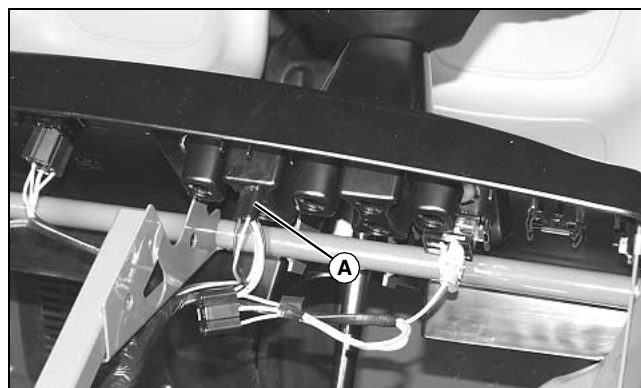
MX33438

3. Rotate bulb socket (A) 1/8 of a turn counterclockwise and remove socket from housing.
4. Disconnect wire connector (B) from socket. Discard the bulb/socket assembly.
5. Connect wiring connector to new bulb/socket assembly. Install the assembly into housing and rotate 1/8 turn to lock in place.
6. Test head lamp function.
7. Install hood.

Replacing Instrument Panel Bulbs

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)

2. Remove hood.

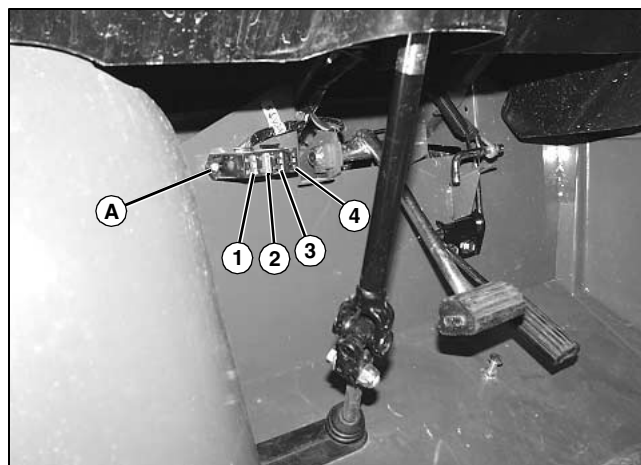


MX33439

3. Reach under instrument panel and remove appropriate bulb socket (A) from plastic housing.
 - Rotate bulb socket 1/8 turn.
 - Pull socket straight outward.
4. Remove bulb from socket. Discard bulb.
5. Install new bulb in socket.
6. Align and insert bulb socket into plastic housing. Turn socket 1/8 turn to lock in place.
7. Install hood.

Checking and Replacing Fuses

1. Park vehicle safely. (See Parking Safely in the SAFETY section.)



MX33299

2. Fuse identification:

Position	Circuit	Fuse Size
1	Starting Motor Solenoid and Charging Circuit	25 amp

SERVICE ELECTRICAL

Position	Circuit	Fuse Size
2	Front and Rear Attachment Circuit	40 amp
3	Ignition Switch ON Circuit	15 amp
4	Accessory Power Plug	10 amp

3. Pull fuse from fuse block (A) (next to foot pedal linkage).

4. Check visually for broken filament in fuse.

IMPORTANT: Avoid damage! The electrical system may be damaged if incorrect replacement fuses are used. Replace the bad fuse with a fuse of the same amp rating.

5. Push new fuse of correct amp rating into proper position in fuse block.

High Capacity Alternator Recommendations

NOTE: See your authorized dealer for purchase of a High Capacity Alternator Kit.

If your vehicle is equipped with accessories that place a higher demand on the charging system, the vehicle's charging system may be supplemented with the use of a High Capacity Alternator Kit.

SERVICE MISCELLANEOUS

Using Proper Fuel

Use regular grade unleaded fuel with an octane rating of 87 octane or higher. Fuel blends containing up to 10% ethanol or up to 15% MTBE reformulated fuel are acceptable. Do not use fuel or additives containing methanol as engine damage can occur.

Always use fresh, clean fuel that is purchased in a quantity that can be used within approximately 30 days, or add fuel stabilizer.

Fuel is blended to give best seasonal performance. To avoid engine performance problems such as hard starting or vapor lock, use in-season fuel. Use fuel during warm weather that was purchased during that season, and use fuel during cold weather that was purchased during that season.

Fuel can become stale in machines with engines that are used seasonally or infrequently during a season. Stale fuel can produce varnish and plug carburetor components which can affect engine performance.

Keep fuel storage container tightly covered and in a cool area out of direct sunlight. Fuel can break down and degrade if not sealed properly or exposed to sun and heat.

Condensation may collect in the fuel tank because of a variety of operating or environmental conditions and, over time, may affect your machine's operation. Fill fuel tank at the end of daily use and store fuel in plastic containers to reduce condensation.

For best year-round performance and fuel-handling, add stabilizer to fuel immediately after fuel purchase. Such practice helps prevent engine performance problems and allows fuel storage in the machine all year without draining.

Filling Fuel Tank



CAUTION: Avoid injury! Fuel vapors are explosive and flammable:

- Shut engine off before filling fuel tank.
- Allow engine to cool before refueling.
- Do not smoke while handling fuel.
- Keep fuel away from flames or sparks.
- Fill fuel tank outdoors or in well ventilated area.
- Clean up spilled fuel immediately.
- Use clean approved non-metal container to prevent static electric discharge.
- Use clean approved plastic funnel without screen or filter to prevent static electric discharge.

IMPORTANT: Avoid damage! Dirt and water in fuel can cause engine damage:

- Clean dirt and debris from the fuel tank opening.
- Use clean, fresh, stabilized fuel.
- Fill the fuel tank at the end of each day's operation to keep condensation out of the fuel tank.
- Use a non-metallic funnel with a plastic mesh strainer when filling the fuel tank or container.

Fill fuel tank at the end of each day's operation to prevent condensation and freezing during cold weather.

1. Park machine safely. (See Parking Safely in the SAFETY section.)
2. Allow engine to cool.
3. Remove any trash from area around fuel tank cap.
4. Remove fuel tank cap slowly to allow any pressure built up in tank to escape.
5. Fill fuel tank only to bottom of filler neck.
6. Install fuel tank cap.

Removing and Installing Front Wheel Assembly

Removing

1. Park machine safely. (See Parking Safely in the Safety section.)

SERVICE MISCELLANEOUS



CAUTION: Avoid injury! The machine can fall or slip from an unsafe lifting device or supports.

- Use a safe lifting device rated for the load to be lifted.
- Lower machine onto jack stands or other stable supports and block wheels before servicing.

IMPORTANT: Avoid damage! Place jack stands under frame, not under transmission or engine, when raising or supporting machine.

2. Raise machine with a safe lifting device and lower machine onto jack stands or other stable supports. Block wheels remaining on the ground to prevent machine movement.



MX33641

3. Remove the cap (A) from the end of the axle hub.
4. Remove flange head bolt (B).
5. Tap on backside of wheel rim with a soft-faced mallet to remove wheel assembly.



CAUTION: Avoid injury! Explosive separation of tire and rim parts is possible when they are serviced incorrectly:

- Do not attempt to mount a tire without the proper equipment and experience to perform the job.

6. Take wheel assembly to an authorized service dealer for repairs.

Installing

1. Apply multipurpose grease to spindle shaft before installing wheel.
2. Install wheel assembly with valve stem to the outside.

IMPORTANT: Avoid damage! Over tightening front wheel bolts can result in bearing damage.

3. Tighten flange head bolt to 88 N•m (65 lb-ft).
4. Install cap.

Removing and Installing Rear Wheel Assembly

Removing

1. Park machine safely. (See Parking Safely in the Safety section.)

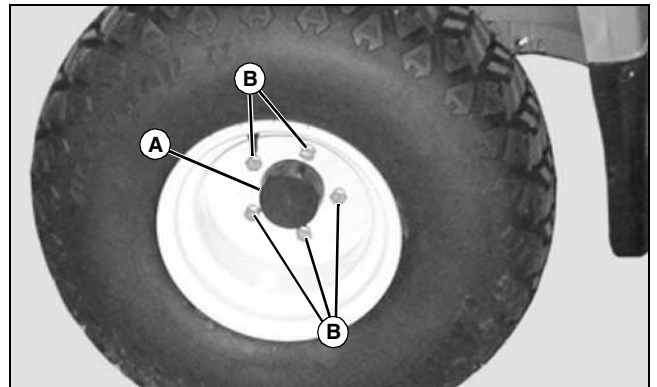


CAUTION: Avoid injury! The machine can fall or slip from an unsafe lifting device or supports.

- Use a safe lifting device rated for the load to be lifted.
- Lower machine onto jack stands or other stable supports and block wheels before servicing.

IMPORTANT: Avoid damage! Place jack stands under frame, not under transmission or engine, when raising or supporting machine.

2. Raise machine with a safe lifting device and lower machine onto jack stands or other stable supports. Block wheels remaining on the ground to prevent machine movement.



MX31037

Picture Note: Wheel may or may not have a cap (A) to remove when removing the wheel.

3. Remove the wheel bolts (B).
4. Remove the wheel assembly.

SERVICE MISCELLANEOUS



CAUTION: Avoid injury! Explosive separation of tire and rim parts is possible when they are serviced incorrectly:

- Do not attempt to mount a tire without the proper equipment and experience to perform the job.

5. Take wheel assembly to an authorized service dealer for repairs.

Installing

1. Apply multipurpose grease to spindle shaft before installing wheel assembly.
2. Install wheel assembly with valve stem to the outside.
3. Tighten wheel bolts evenly in alternating sequence until snug.
4. Lower machine completely to the ground.
5. Tighten wheel bolts to 88 N•m (65 lb-ft).

Removing and Installing Hood



CAUTION: Avoid injury! Prevent injury from moving parts. Stop engine and remove key before adjusting or servicing the machine.

Removing Hood

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)



MX33300

2. Stand in front of vehicle, and grasp hood near arrow marks (A). Pull out firmly.

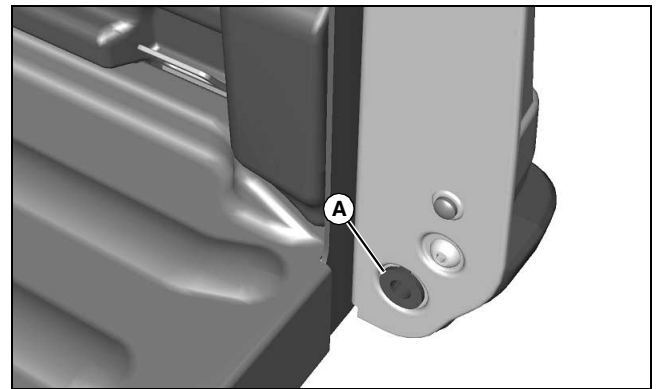
IMPORTANT: Avoid damage! When removing hood (B), set hood in an upright position and not on top side of hood.

3. Pull forward on hood (B) and remove hood from under dash panel (C).

Installing Hood

1. Install hood (B) under dash panel (C).
2. Pivot hood downward, pushing near arrows (A) to secure rubber retainers on hood tabs onto molded retainers on front fenders.

Replacing Cargo Box Tailgate Bushings



MX27349

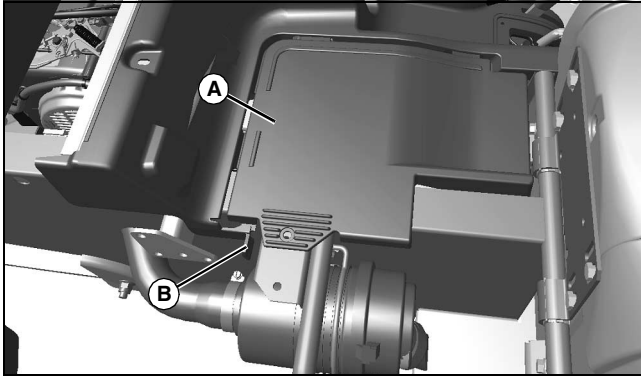
1. Remove the cargo box tailgate (See Removing the Tailgate in OPERATING).
2. Remove snapfit bushing (A) from both sides of cargo box.
3. Replace bushings and reinstall the tailgate.

Opening and Closing Service Access Panel

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)

SERVICE MISCELLANEOUS

IMPORTANT: Avoid damage! For proper vehicle operation, always operate with panel (A) installed.

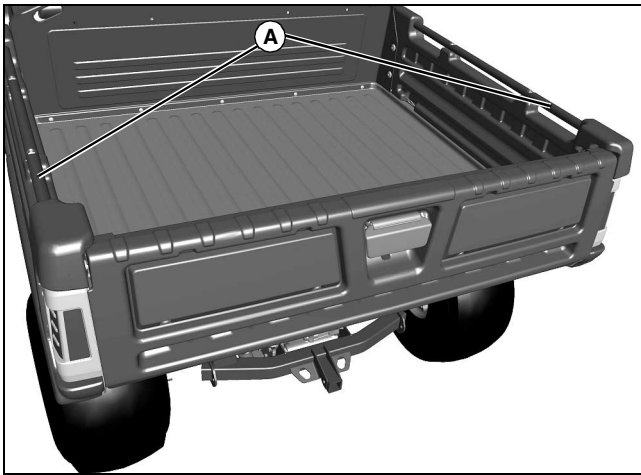


MX33873

2. Locate service access panel (A) under passenger seat. Pull back on latch (B), and remove panel.

Cleaning and Repairing Cargo Box

Repairing Accessory Tubes



MX43072

Use 3M™ Scotchbrite™ pad to polish and smooth nicks, scrapes or scratches in the vinyl surface of the tubes (A).

Cargo Box Floor

A rejuvenating product is available for cargo boxes with the optional spray-in liner. See your John Deere dealer.

Cleaning Plastic Hood and Body Panel Surfaces

IMPORTANT: Avoid damage! Improper care of machine plastic surfaces can damage that surface:

- Do not wipe plastic surfaces when they are dry. Dry wiping will result in minor surface scratches.
- Use a soft, clean cloth (bath towel, diaper, automotive mitt).
- Do not use abrasive materials, such as polishing compounds, on plastic surfaces.

1. Rinse with clean water to remove dirt and dust.
2. Dry thoroughly to avoid water spots.
3. Spray PLEDGE® onto hood and surfaces and leave on for 30 to 60 seconds.
4. Wipe off with cheesecloth to bring out lustre.

Cleaning and Repairing Metal Surfaces

Cleaning:

Follow automotive practices to care for your vehicle painted metal surfaces. Use a high-quality automotive wax regularly to maintain the factory look of your vehicle's painted surfaces.

Repairing Minor Scratches (surface scratch):

1. Clean area to be repaired thoroughly.

IMPORTANT: Avoid damage! Do not use rubbing compound on painted surfaces.

2. Use automotive polishing compound to remove surface scratches.
3. Apply wax to entire surface.

Repairing Deep Scratches (bare metal or primer showing):

1. Clean area to be repaired with rubbing alcohol or mineral spirits.
2. Use paint stick with factory-matched colors available from your authorized dealer to fill scratches. Follow directions included on paint stick for use and for drying.
3. Smooth out surface using an automotive polishing compound. Do not use power buffer.
4. Apply wax to surface.

TROUBLESHOOTING

Using Troubleshooting Chart

If you are experiencing a problem that is not listed in this chart, see your authorized dealer for service.

When you have checked all the possible causes listed and you are still experiencing the problem, see your authorized dealer.

Engine

IF	CHECK
Engine will not start	Check to make sure vehicle is in neutral position and/or function of neutral switch. Battery has low voltage. Loose or corroded battery connections. Blown fuse(s). Spark plug wire(s) is loose or disconnected. Faulty spark plug(s) or coil. No fuel or improper fuel. Plugged fuel filter. Defective starter solenoid. Open-circuit in wiring.
Engine is hard to start	Engine is cold. Plugged fuel filter. Engine oil viscosity too heavy. Spark plug(s) is fouled. Faulty spark plug(s) or wire(s). Loose or corroded electrical connections. Stale or improper fuel. Choke not being used or adjusted incorrectly.
Engine misses under load	Stale or dirty fuel. Plugged fuel filter. Faulty coil or wire. Faulty spark plug(s).
Engine vapor locks	Poor quality fuel or methanol. Very hot weather conditions and very high loading condition. Fuel tank vent plugged. Dirt in fuel filter.

TROUBLESHOOTING

IF	CHECK
Engine runs unevenly	Loose electrical connections. Choke or throttle cable sticking. Fuel line or fuel filter plugged. Stale or dirty fuel. Improper fuel. Air cleaner element plugged. Spark plug(s) is fouled.
Engine overheats	Air cleaner element missing or plugged. Carburetor air intake tube plugged. Engine oil low. Engine operated too long at slow engine speed.
Engine loses power	Engine overheating. Too much oil in engine. Faulty spark plug(s). Fuel supply being restricted. Fuel filter plugged Fuel line pinched or kinked. Improper fuel. Air cleaner element plugged.
Engine knocks	Low engine speed. Stale or low octane fuel. Engine overloaded.

Electrical

IF	CHECK
Starter does not work	Check to make sure vehicle is in neutral position and/or function of neutral switch. Loose or corroded connections. Blown fuse. Low battery output. Sulfated or worn out battery. Faulty starter.
Starter cranks slowly	Low battery output. Sulfated or worn out battery. Engine oil too heavy. Loose or corroded connections.

TROUBLESHOOTING

IF	CHECK
Entire electrical system does not work	Blown fuse. Blown fusible link. Loose or corroded connections. Sulfated or worn out battery.
Dead battery	Shorted starter solenoid. Key switch not turned to "OFF" position. Component connected to accessory outlet left ON with engine off. Turn signal and/or hazard lights left ON with engine off. Sulfated or worn out battery. Low engine speed or excessive idling. Battery cables and terminals are dirty. Dead cell in the battery. Blown fuse. Faulty charging system. Current draw higher than charging system output. (If several attachments are added and used frequently at the same time with the standard charging system. Especially at low engine speeds.)
Correct indicator light(s) do not come on when checking instrument panel.	Faulty bulb. Faulty wiring. Faulty switch or sensor.
Battery will not take a charge	Dead cell in battery. Loose or corroded connections. Sulfated or worn out battery. Low engine speed or excessive idling. Faulty charging system.

Brakes

IF	CHECK
Brakes squeal or make noise	Change transaxle oil. Check for debris or moisture in oil.
Excessive foot pedal freeplay	Adjust brake linkage. (See your authorized dealer for service.)

TROUBLESHOOTING

Cargo Box

IF	CHECK
Tailgate doesn't latch properly	Bushings worn/damaged - inspect bushings. Strikers not connecting - inspect and lubricate strikers.
Power lift doesn't operate	No power - check all power connections. Actuator motor overheated - allow actuator to cool.
Power lift actuator ratchets/clicks when operating	Too much weight in box - remove weight or move it rearward in box.

STORAGE

Storing Safety



CAUTION: Avoid injury! Fuel vapors are explosive and flammable. Engine exhaust fumes contain carbon monoxide and can cause serious illness or death:

- Run the engine only long enough to move the machine to or from storage.
- Do not store vehicle with fuel in the tank inside a building where fumes may reach an open flame or spark.
- Allow the engine to cool before storing the machine in any enclosure.

Preparing Machine for Storage

1. Repair any worn or damaged parts. Replace parts if necessary. Tighten loose hardware.
2. Repair scratched or chipped metal surfaces to prevent rust.
3. Remove grass and debris from machine.
4. Wash the machine with low pressure water and apply wax to metal and plastic surfaces.
5. Run machine for five minutes to dry belts and pulleys.
6. Apply light coat of engine oil to pivot and wear points to prevent rust.
7. Lubricate grease points.
8. Check tire pressure.

Preparing Fuel and Engine For Storage

Fuel:

If you have been using "Stabilized Fuel," add stabilized fuel to tank until the tank is full.

NOTE: Filling the fuel tank reduces the amount of air in the fuel tank and helps reduce deterioration of fuel.

If you are not using "Stabilized Fuel:"

1. Park machine safely in a well-ventilated area. (See Parking Safely in the SAFETY section.)

NOTE: Try to anticipate the last time the machine will be used for the season so very little fuel is left in the fuel tank.

2. Turn on engine and allow to run until it runs out of fuel.
3. For machines equipped with key switch, turn key to off

position.

IMPORTANT: Avoid damage! Stale fuel can produce varnish and plug carburetor or injector components and affect engine performance.

- Add fuel conditioner or stabilizer to fresh fuel before filling tank.

4. Mix fresh fuel and fuel stabilizer in separate container. Follow stabilizer instructions for mixing.
5. Fill fuel tank with stabilized fuel.
6. Run engine for a few minutes to allow fuel mixture to circulate through carburetor on gas engine or fuel injectors on diesel engine.

Engine:

Engine storage procedure should be used when vehicle is not to be used for longer than 60 days.

1. Change engine oil and filter while engine is warm.
 2. Service air filter if necessary.
 3. Clean debris from engine air intake screen.
 4. On gas engines:
 - Remove spark plugs. Put 30 mL (1 oz) of clean engine oil in cylinder(s).
 - Install spark plugs, but do not connect spark plug wires.
 - Crank the engine five or six times to allow oil to be distributed.
 5. Clean the engine and engine compartment.
 6. Remove battery.
 7. Clean the battery and battery posts. Check the electrolyte level, if your battery is not maintenance free.
 8. Close fuel shut-off valve, if your machine is equipped.
 9. Store the battery in a cool, dry place where it will not freeze.
- NOTE: The stored battery should be recharged every 90 days.**
10. Charge the battery.

IMPORTANT: Avoid damage! Prolonged exposure to sunlight could damage the hood surface. Store machine inside or use a cover if stored outside.

11. Store the vehicle in a dry, protected place. If vehicle is stored outside, put a waterproof cover over it.

STORAGE

Removing Machine From Storage

1. Check tire pressure.
2. Check engine oil level.
3. Check battery electrolyte level, if your battery is not maintenance free. Charge battery if necessary.
4. Install battery.
5. On gas engines: Check spark plug gap. Install and tighten plugs to specified torque.
6. Lubricate all grease points.
7. Open fuel shut-off valve, if your machine is equipped.
8. Be sure all shields and guards or deflectors are in place.

SPECIFICATIONS

Engine Specifications

Make	Kawasaki FH601
Type	Gasoline
Cylinders	2
Strokes/Cycle	4
Bore	75 mm (2.953 in.)
Stroke	76 mm (2.992 in.)
Displacement	675 cm ³ (41.2 cu in.)
Armature Air Gap	0.2 - 0.4 mm (0.008 - 0.016 in.)
Intake and Exhaust Valve Clearance (cold)	0.075 - 0.125 mm (0.003 - 0.005 in.)
Oil Filter	Spin On Filter
Air Cleaner	Replaceable, Paper Element
Cooling	Air

Drive Train

Type	Continuously Variable Transmission (CVT), With Gear-Driven Transaxle
Gear Ranges	Forward - Neutral - Reverse
Travel Speed (Forward)	0 - 32 km/h (0 - 20 mph)
Travel Speed (Reverse)	0 - 31.2 km/h (0 - 19.4 mph)
Drive Chain	#60 Industrial Roller Chain
Traction Assist	Mechanically Activated Differential Lock

Electrical System

Type	12 Volt
Battery Size	340 Cold Cranking Amps @ -18°C (0°F)
Alternator	16.6 Amp @ 3700 rpm (regulated)
Headlights	(Two) 37.5 watt halogen
Spark Plug Gap	0.80 mm (0.031 in.)
Spark Plug Torque	25 N•m (18 lb-ft)

Fuel System

Fuel Filter	Replaceable Element
Fuel	Gasoline

Fluid Capacities

Fuel Tank	19 L (5 gal)
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SPECIFICATIONS

Crankcase (with filter)	1.7 L (1.8 qt)
Transaxle (approximate - see Changing Transaxle Oil)	5.8 L (6.1 qt)

Steering and Brakes

Steering	Rack and Pinion
Brakes	Mechanically Operated Internal Wet Disk

Tires

Knobby

Front	22.5x10-8
Rear	25x12-9

Heavy Duty All Purpose (HDAP)

Front	22.5x10-8
Rear	25x13-9

Turf

Front	22.5x10-8
Rear	25x12-9

Run-Flat

Front	22x11-10
Rear	25x11-10

Inflation Pressure

Front and Rear (Knobby, Turf, and HDAP)	41 kPa (6 psi)
Front and Rear (Run-Flat)	28-34 kPa (4-5 psi)

Dimensions

Width (overall)	1.52 m (60.0 in.)
Length (with bumper)	2.76 m (109.0 in.)
Height (overall)	1.11 m (43.6 in.)
Weight (includes fuel/fluids)	539 kg (1188 lb)
Ground Clearance (under transaxle)	170 mm (6.4 in.)
Cargo Box Capacity	454 kg (1000 lb)
Cargo Box Volume Capacity	0.46 cubic m (16.4 cubic ft)
Towing Capacity	635 kg (1400 lb)

SPECIFICATIONS

Recommended Fluids and Lubricants

Engine Oil TURF-GARD™ OR PLUS-4™

Grease John Deere Multi-Purpose SD Polyurea Grease
..... John Deere Multi-Purpose HD Lithium Complex Grease

Transmission Oil..... John Deere HY-GARD™ (JDM J20C)

Chain Lubricant John Deere Chain and Cable Lubricant (Moly)

(Specifications and design subject to change without notice.)

DECLARATION OF CONFORMITY

EC Declaration of Conformity

Deere & Company

Moline, Illinois U.S.A.

The person named below declares that

Machine Type: Utility Vehicle (UV)
Model: TH Gas
Serial Number: See Product Identification Page

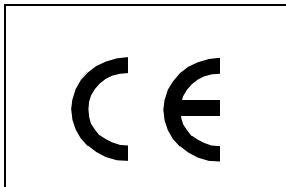
fulfills all relevant provisions and essential requirements of the following directives:

DIRECTIVE	NUMBER	CERTIFICATION METHOD
Machinery Directive	98/37/EC (Until Dec. 28 2009)	Self-Certification
Machinery Directive	2006/42/EC (89/392/EEC)	Self-Certification
Electromagnetic Compatibility Directive	2004/108/EC	Self-Certification

Name and address of the person in the community authorized to compile the technical construction file:

Henning Oppermann
Deere & Company European Office
John Deere Strasse 70
Mannheim, Germany D-68163
EUConformity@JohnDeere.com

Signed:



The image shows a handwritten signature in black ink, enclosed within a rectangular border. The signature appears to be 'R. Frank'.

Place of declaration: Horicon, Wi. USA

Date of declaration: July 15, 2009

Manufacturing unit: John dDeere Horicon Works

Name: Reinhard Frank

Title: Manager European Product Conformity Turf & Utility Platform

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SERVICE STATEMENT

John Deere Parts



We help minimize downtime by putting genuine John Deere parts in your hands in a hurry.

That's why we maintain a large and varied inventory - to stay a jump ahead of your needs.

Well-Trained Technicians



School is never out for John Deere service technicians.

Training schools are held regularly to be sure our personnel know your equipment and how to maintain it.

Result? - Experience you can count on!

The Right Tools



Precision tools and testing equipment enable our Service Department to locate and correct troubles quickly... to save you time and money.

Prompt Service



Our goal is to provide prompt, efficient care when you want it and where you want it.

We can make repairs at your place or at ours, depending on the circumstances: see us, depend on us.

JOHN DEERE SERVICE SUPERIORITY: We'll be around when you need us.

SERVICE RECORD

Record Service Dates

Oil Change	Oil Filter Change (If Equipped)	Lubricate Machine	Air Cleaner Element Check/Clean	Fuel Filter Change